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ABSTRACT

Despite their progress, most schools in Kansas' Quality Performance Accreditation (QPA) System fall short of the philosophy and practice envisioned by QPA. What has been accomplished and what remains to be done in QPA is detailed in this two-volume report. It was found that teachers working together were at the center of improvement. Schools where teachers recognized a problem existed but saw no way to fix it usually did not show improvement in academic performance. Many teachers' horizons were circumscribed; some of the solutions put into place were neither research-based nor particularly effective. Two elements were required for improvement: recognizing problems and believing them to be "fixable." Schools offering solutions found that they gained in teacher strength and pride. Taken as a whole, the QPA pilot schools perform on a par with all other schools in Kansas, although about a fifth of the 135 QPA pilot schools recorded strong, measurable improvement in student academic performance. The most identified components of success were the QPA pressures to identify, collect, and analyze object data on performance and then assess the data and implement solutions. The second volume of the report features technical appendices consisting of data sources, technical issues, and the data collection instruments. (RJM)

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ED 418 507

A REPORT ON RESULTS ACHIEVED BY SCHOOLS THAT PILOTED THE KANSAS QUALITY PERFORMANCE ACCREDITATION SYSTEM

VOLUME I

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Principal Investigator

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SUMMARY

In those Kansas QPA pilot schools where student academic performance has been rising since 1992, stakeholders (particularly teachers but including parents and community members) talk more about change and experiment more with new practices than in schools where academic performance is holding steady or declining. Schools that are improving are finding that increased, better-focused professional development supports change, as do specific instructional practices and assessment rubrics such as the six-trait writing model. However, despite their progress, most of these schools have not yet fully reached the philosophy and practice of schooling envisioned by the QPA process.

Teachers, working collaboratively, were at the center of improvement. In improving schools, teaching staff realized that specific problems existed and that they, the teachers, had the capacity, skill, and support to attack the problems successfully. Some schools were led to this realization by a superintendent or principal; at other schools, a teacher or group of teachers reached it independently. For some schools, the process began when becoming a QPA pilot school required them to collect data and look at their performance; for others, the QPA process built on work begun previously.

Schools where teachers recognized a problem existed but saw no way to fix it usually did not show improvement in academic performance. Both elements, recognizing a problem and believing it to be "fixable," were required. QPA provided the opportunity to see and to find new support for fixing things.

Many improving schools found they gained in teacher strength and pride. Staff in the improving schools frequently reported that they possessed solid skills and important answers, and that they were neither helpless nor dependent upon outside experts or processes. Some evidence suggests that smaller, more isolated schools might have a leg-up in the process towards improvement: They appear to have little choice but to rely on themselves.

On the other hand, much work remains. Many teachers' horizons are circumscribed: They do not stand tall enough and do not see far enough. Some of the solutions pilot schools have put into place are neither research-based nor particularly effective. Many teachers complain of needless QPA paperwork; some deny external evidence of their own effectiveness; some resent state interference (while requesting support).

Taken all together and looking back over time, the QPA pilot schools perform on a par with all other schools in Kansas: As a group, their performance on the Kansas Assessment annually is not distinguishable from other Kansas schools. (But then, all Kansas schools are now part of QPA.) On the other hand, about a fifth of the 135 QPA pilot schools recorded strong, measurable improvement in student academic performance since 1992.

Almost without exception, staff at these improving schools identified consequences of their participation in the QPA pilot process to be among the critical elements enabling the drive toward school improvement. That some of the QPA pilot schools seized the opportunities provided by QPA to pull themselves up, often by little more than their boot straps, attests to the strength of the teaching staff and to the promise of QPA.

Staff at the improving schools over and over again pointed to two factors in their success, both a part of the QPA process. The first was the QPA pressure to identify, collect, and analyze objective data on school, teacher, and student performance. The second was that analysis and interpretation of the data and the implementation of solutions should be a collaborative activity, led by staff and often shared with the community.

It may be best to let three of these teachers speak:

It was the QPA teams from each school that made the difference, because we saw the data; we realized what needed to be done to improve, and where we needed it to be done.

We spent countless hours [deciding] what we really wanted our children to achieve and master. Maybe now we know where we are to focus, what we are to do. We have more purpose, more goals.

You need objectives to know what you're going to teach and what's important to the community. The thing QPA does is, it makes you pay attention.

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Arie van der Ploeg
Principal investigator

A Report on Results Achieved by Schools That Piloted the Kansas Quality Performance Accreditation System

Introduction

In August 1997, NCREL began a longitudinal analysis of student academic performance and contributing factors in the 135 pilot schools that participated in developing the Kansas Quality Performance Accreditation (QPA) System. This analysis spanned the school years 1991–92 through 1996–97. Two questions guided the study:

- What do longitudinal data show about changes in student academic performance in the QPA pilot schools?
- What key factors contributed materially to change in pupil academic performance in the QPA pilot schools?

NCREL brought to this work a set of core understandings about schools. These include:

- Teaching and learning is the heart of any school's enterprise; all other tasks must support teaching and learning.
- Student and teacher engagement in learning must be constant, deep, and of high quality.
- The key measure of a school's productivity is the quality of learning.
- Quality teaching is open, collaborative, and communal.
- Effective, productive schools are communities of learners.
- School improvement is a local phenomenon; family and community involvement enhance that process.

Many factors influence students' performance in school. Central is what teacher and pupil do together, what they enable each other to accomplish. The rest of schooling must build on this core, and policy that seeks to improve schooling must be designed to support it. Any analysis of the factors that lead to change in schools must address activities that occur in classrooms.

Numerous studies of school performance have focused on factors that exist outside the school walls, such as poverty, race, and parental education—factors over which school practitioners have little control (Coleman, 1966; Hanushek, 1997; Monk, Hussain, Brent, & Roellke, 1997). But research also shows that such external factors account for little of the differences in performance among students within schools (Bryk, Lee, &

Holland, 1993; Odden 1991). In other words, in-school factors that classroom teachers, building principals, and boards of education can influence and control have the potential to make a difference in how well students perform (Barr & Dreeben, 1983; Lee, Croninger, & Smith, 1997; Newman & Wehlage, 1995; Smylie, Lazarus, & Browlee-Conyers 1996).

The task, then, for school practitioners, and the communities in which they work, is to identify the productive in-school factors and to work locally to reinforce and expand their effects, regardless of the external factors present. This is not a simple task: Schools are complex and human institutions, rooted to their local communities and to the larger professional education community in intricate ways. But any school–whatever its circumstances or its community's circumstances–can improve.

These requirements demanded an evaluation that recognized the differences among individual schools and districts and used local school data, nested within larger perspectives on student academic performance and school improvement patterns. NCREL collected data at three levels:

- Using statistics from the Kansas State Board of Education, the National Center of Education Statistics, and the U.S. Census, we built a database of statistical data describing Kansas' public schools and districts.
- For each of the 135 pilot schools, we collected documents descriptive of the schools and their QPA participation as well as survey data from principals and teachers.
- In site visits to 20 Kansas schools, we conducted observations and collected focus group and interview data.

The statewide data permitted broad-stroke statistical analyses of student academic performance. The documentary and survey evidence from the 135 schools sharpened the focus of the statewide analysis, generating glimpses of the form and functioning of the factors that affect school change. The site-based evidence permitted direct testing of the foregoing analyses and, most important, described the dynamics of in-school processes.

Our plan of work was as follows:

- For all Kansas schools, analyze Kansas Assessment and QPA indicator data for trends over time in student academic performance and identify any relationships of those trends to each other and to other demographic and educational variables. This portion of the analysis sought to determine if change in student academic performance over time was evident in the QPA pilot schools from a large-scale perspective.
- For the 135 QPA pilot schools, obtain, from survey results and document analysis, measures of change in teacher and principal behavior and analyze these in relationship to changes in student academic performance. This portion of the analysis attempted to define some of the key factors contributing to change, using a middle-level perspective.
- For 20 schools with records of improving student academic performance over time, observe closely, via interviews and on-site observation, how these

schools made and managed instructional change. This is the richest part of the analysis, providing direct evidence of the changes occurring in schools that led to consistent, long-term improvement in student academic performance.

The report that follows is based on a rich, multilevel, multimethod, and multivariate analysis. It makes use of statistical, documentary, and participant data and appropriate techniques. For each data type, multiple measures and perspectives are used, ranging from sophisticated statistical procedures, such as factor analysis, to the structured field notes of ethnographic investigation. This variety enables triangulation of evidence and constant and consistent internal testing of the validity of our understandings.

To simplify the presentation, a series of appendices follow the report. The most important appendices are the ones on data sources and technical issues. These two are critical reading for those who desire to review our compilation of the evidence and the techniques we used to extract meaning. In the report proper, we present our understandings directly, supporting them with graphics, brief tables, quotes, and anecdotes.

Statewide Analysis

Did student academic performance improve in the QPA pilot schools? A variety of measures of student performance can be offered: the Kansas assessment results, course-taking patterns, changes in students' experiences after completing high school, more students completing high school, a more civil school experience (fewer discipline problems, for instance).[1] The most direct measure, however, are results from the Kansas Assessment. In practical terms, they are the most complete data, collected for all Kansas public schools since 1992.[2]

The Kansas Assessment

Initially, the Kansas Assessment system, unlike most other state assessment systems, intentionally avoided comparing schools (Poggio, 1997; Roeber, Bond, & Braskamp, 1997; Bond, Friedman, & van der Ploeg, 1994). Accountability was to the local staff and local community first. In fact, in the first full year, 1992, schools were presented with three forms of the test and asked to choose the one most relevant to their needs. They were explicitly told the forms could not be compared.

From the inception of the assessment program as a pilot in 1991, staff were encouraged to use the results to identify instructional strengths and weaknesses in their school and their practice. Only in the past several years have staff also been told they

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[1] This list includes only measures expected to be available to the study for all schools statewide. Other, possibly more pertinent measures, are conceivable. These include commercial standardized test results, one or another of which most Kansas schools use; report card results or classroom grades; for high schools, ACT, or SAT results; and so on. These are all difficult to obtain or are not available for all schools.

[2] This study is constrained by the data available. See the Data Sources appendix for details on the availability of the QPA indicators.

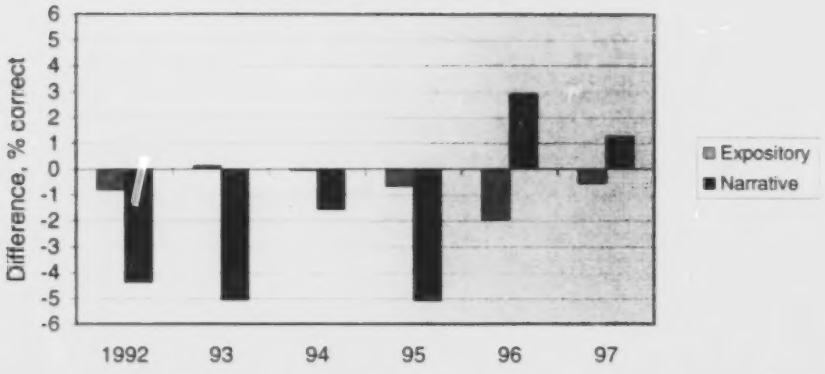
may use the results to look at their own school's progress over time. They are provided with strong cautions about the limits of such comparisons (for example, see the 1996 *Interpretation Manual*, p. 22 [University of Kansas, 1996]).

Nevertheless, the Kansas Assessment is the only continuously administered statewide measure of student academic performance. At minimum, if participation in the QPA pilot affects student academic performance, it should be evident in differences in performance over time when the QPA pilot schools are compared to all other schools in Kansas.

Figure 1 provides such a perspective for the grade seven reading assessments.[3] It reports the difference between the mean for the 135 QPA pilot schools and the mean for all other Kansas schools for each year. In this figure, a positive difference means the QPA pilot schools did better. If QPA participation influences student academic

Figure 1

Grade 7 Performance Differences
Kansas Reading Assessment
QPA Pilot and Other Schools



performance, then the difference between the performance of the pilot schools—which began using QPA earlier and more intensely than other schools—and all other schools should at first favor QPA pilot schools and should become larger over time.[4] This pattern is not evident for grade seven expository reading or narrative reading. QPA and non-QPA schools performed nearly identically. The differences are five percentage points or less each year. More often than not, the pilot schools do worse than the other schools.

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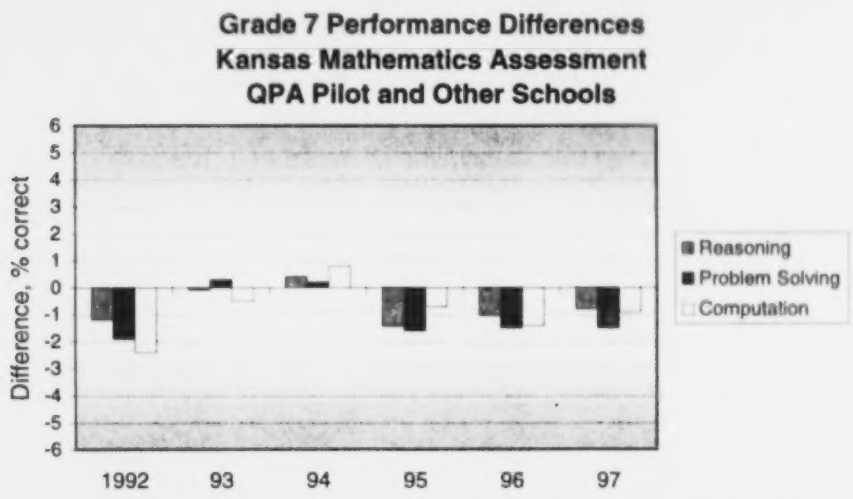
[3] This figure presents the average of the distribution of building-level means, not of individual student scores. The data therefore depart somewhat from the state average percent correct figures reported by the Kansas Assessment [Kansas State Board of Education, 1996]. Their figures are based on student data. Each calculation method serves a particular purpose. Neither is wrong nor right. It is the responsibility of the reader to understand the analytical choice.

[4] All Kansas schools are now in QPA. The point here is that the pilot schools participated earlier than most other Kansas schools. If QPA makes a difference, then early on the pilot schools should have an advantage. At some future date, one would expect the differences to shrink as *all* schools improve.

Figure 2 makes the same presentation for the three major mathematics subscales.[5] Again, there are almost no differences between the QPA pilot schools and all other schools in Kansas. If anything, the pilot schools perform slightly less well.

Figure 2



Data for the other grades also show no meaningful differences in both subjects between QPA pilot schools and all others.[6] The implication is that while there may have been changes in student academic performance in QPA pilot schools, those changes, at the mean, appear to be no different than those in other Kansas schools.

But, it is not really differences in the means at any one point in time that matters. What matters is the trend over time. If the concern is change in student academic performance, then we need to be able to see that change as a trend. Change that vacillates—up, then down—permits no clear conclusions about what works or how to improve. Only a record in time of consistent improvement (or failure) creates the possibility of seeing correlates (other changes that exist in the same or just prior time span), some of which may be the causes.

The two guiding questions of this study, "Was there change in academic performance?" and "What factors contribute to this change?" are both about the cumulative effects of the actions and behaviors of individual students and teachers. We want to know primarily two things about these behaviors:[7] the behavior's source—how it came to be, and the behavior's cause or control mechanism—how it works.

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[5] The mathematics test today contains fewer subscales than in 1992. The remaining subscales have increased in breadth of domain by agglomeration over time. The comparison presented here should therefore be treated as illustrative only.

[6] The figures are reproduced in the Technical Issues appendix.

[7] Our apologies to the ethologist Niko Tinbergen, whose work is poorly paraphrased here (Tinbergen, 1963).

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The first is a historical question: development occurs in time; that is, we need to see the trend. The second is a functional question: We need to understand the behavior in order to replicate it. That is, we need to see the behavior and to see behind it, so to speak. That requires direct observation in schools. The group means may hide changes occurring at individual schools. It is only by understanding what controls change within single schools that we can come to understand the factors that influence change. That is why NCREL proposed an aggregate analysis based on change over time and a micro-analysis (site visits) to see the behavior and to hear the actors describe the how and why.

What is needed at this point of the analysis, then, is a consistent measure of trend (of change over time) for *individual* schools. We can then compare schools, analyze the patterns of these trends across schools, and investigate their correlates.

NCREL constructed an alternative representation of the Kansas assessment results. The preceding discussion used the percent correct scoring of the Kansas Assessment.[8] However, such scores are not comparable over time when the test changes from year to year. We built three alternative measures—for expository reading, narrative reading, and mathematics—that were consistent implementations of the test domains over the 1992-1997 time period.[9] We built each of these so that its distribution was identical to all the others (a so-called normal distribution with a mean of zero and standard deviation of one). Refer to the Technical Issues appendix for more detail on this transformation.

Trends

A school that is improving its students' academic performance will show a trend line in our standardized metric that is positive, meaning each subsequent year the school ranks a little higher on the list of Kansas schools. For any school, this progression will probably appear on a graph as a series of points tending upwards. The statistical technique of linear regression draws a straight line through a set of points that best "fits" or represents the trend of those points. The angle or slope of this line, also called its *beta*, summarizes the rate of change.

A graphical depiction may help. Figure 3 depicts the tested narrative reading performance of seventh graders at Stanton County Middle School in southwestern Kansas from 1993 to 1997. The irregular line traces the actual performances over time. The bold solid line is the regression that best fits the points defining the actual performance. The *beta* coefficient, or slope, of this line summarizes the rate at which this school produces improvement for its successive seventh-grade classes.

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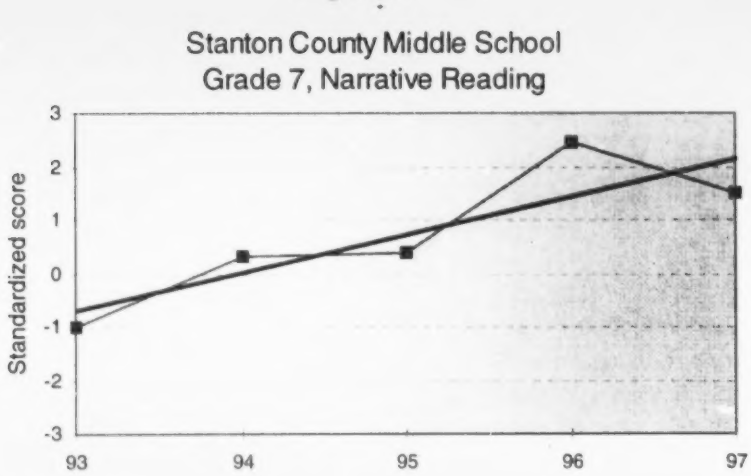
[8] In 1994 the Kansas State Board of Education set "performance standards" for schools on the Kansas assessment. We chose not to analyze student performance against these standards. The building percent correct averages carry more and more accurate information about performance, and statistics on the percent meeting standards bring with them a new set of uncertainties (Yen 1997).

[9] On the advice of John Poggio, head of the Center for Educational Testing and Evaluation at the University of Kansas, we combined the three mathematics subscales into one measure but retained the two reading measures. The single mathematics measure is analogous to the mathematics power score currently reported to schools for the Kansas Assessment.

Figure 3



NCREL calculated regression lines and slope coefficients for each Kansas public school's assessment results at each grade reported. Schools with high slopes have strong improvement trends over time; schools with negative slopes are declining in performance.[10]

We correlated the slopes to school characteristics, for all Kansas public schools. First, we looked at characteristics that describe schools and their communities but are not under the direct control of school staff. These included enrollment, pupil-teacher ratio, proportion minority, and proportion receiving free or reduced-price lunch. Table 1 reports the results, as correlation coefficients.[11] All the correlations are near zero: in Kansas, the relationship between the rate of improvement and these exogenous variables is random.[12]

Table 1. School Characteristics and School Improvement

	Grade 3		Grade 4	Grade 7			Grade 10		
	Exp	Nar	Math	Exp	Nar	Math	Exp	Nar	Math
Enrollment	0.05	-0.03	0.01	0.02	-0.01	0.04	0.01	-0.01	-0.01
Pupil:Teacher Ratio	-0.09	-0.06	0.01	-0.03	-0.06	0.02	-0.02	0.01	-0.03
% Minority	0.05	0.06	-0.02	0.02	0.00	-0.03	0.05	0.04	0.13
% Free Lunch	-0.01	0.03	-0.04	0.06	0.07	-0.02	-0.02	0.03	0.03

[10] There is another parameter of interest. Some regression lines fit their data points closely, others loosely. The slope coefficient for lines that fit tightly carries a stronger meaning than if the line fits loosely. In other work on other data sets, we have been examining this issue more closely. For this study, variation in the goodness of fit does not have much consequence.

The techniques described here are more commonly used in econometric and social research than in educational research (e.g. Lewis-Beck, 1986). Recently, similar procedures have been applied to National Assessment of Educational Progress data (Campbell, Voelkl, & Donahue, 1997).

[11] Correlations take the value of +1.0 when two distributions are perfectly aligned (tall people are also heavier), the value of –1.0 when they are perfectly opposed (short people are heavier), and the value of 0.0 when the relationship is random (no relationship between height and weight).

[12] Typically, poverty or free lunch correlates negatively with student performance: students from more disadvantaged homes usually perform less well on measures of academic achievement. But, and this is critical, we are correlating slopes: there is no *prima facie* reason why students from disadvantaged homes should not be able to *improve* their performance as rapidly as more advantaged students. When we correlate the Kansas schools' achievement levels, not the slopes, we obtained the expected inverse relationship: -.51 between percent free lunch and grade seven math performance in 1996, for instance.

We completed one more examination of the performance trend data.[13] The Kansas assessment occurs only in select grades. This analysis uses only two of the subjects assessed. If schools are the productive units, one would expect that schools improving in grade four, say, would also show improvement at grade seven. The same expectation would hold for the relationship between math and reading.

Table 2 presents correlations among the slopes for each subject and grade for all Kansas schools, for all cells with at least 15 data points.[14] The expository and narrative reading slopes, not surprisingly, correlate positively at all three grade levels. However, the magnitude of the correlations is not high, reaching 0.6 only in grade seven. The correlation between grade levels averages about zero, and is occasionally negative. Improvement in math in grade seven is not related to improvement in math in grades four or ten (correlations of 0.0 and 0.2, respectively). The within-grade correlations for the two reading measures run near 0.3 for grades seven and ten, but approach zero for grade three.

Table 2. School Improvement by Subject and Grade

	Grade 3		Grade 4	Grade 7			Grade 10	
	Exp	Nar	Math	Exp	Nar	Math	Exp	Nar
Grade 3 Narrative	0.23							
Grade 4 Math	0.02	-0.01						
Grade 7 Expository	-0.06	-0.06	-0.09					
Narrative	-0.03	-0.13	-0.09	0.63				
Math	0.33	-0.03	0.01	0.33	0.30			
Grade 10 Expository				0.02	0.21	0.13		
Narrative				-0.03	0.09	-0.07	0.46	
Math				0.00	0.12	0.20	0.29	0.18

All told, this correlation matrix provides little support for the concept of the school as the productive unit. There is no marked tendency in these data for a school improving in math to improve also in reading. There appears to be little evidence to support the supposition that an elementary school improving at grade three is also improving at grade four or grade seven. This leads to the proposition that it may be more appropriate to think of individual teachers or groups of teachers making change, more or less independent of others in the same school. The research literature on the "loosely coupled" organizational structure of schools would certainly support such a hypothesis (Weick, 1976).

In sum, the statewide analysis suggests that improvement in student academic performance as measured by the Kansas Assessment is not systematically related to school or community demographics. That finding props open the door that other, within

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[13] We had planned to correlate the performance slopes to the QPA indicators on school progress that are reported to the Kansas Board of Education annually. Relevant measures include suspensions and expulsions, criminal violations, dropping out, advanced courses in math or science, and placement after graduation. Most speak only to high school issues. Moreover, the data are lacking or inconsistent for many schools and years.

[14] There are very few high schools that enroll and teach third graders, for instance.

school factors may explain improvement in performance. Furthermore, the Kansas assessment data suggest that improved student academic performance is relatively independent from grade to grade and from subject to subject. That, in turn, suggests that it is the action of individuals or groups of individuals within schools that are the productive element, not simply the "school" as an institutional form.

Student Performance in QPA Pilot Schools

We turn next to an investigation of change in student academic performance in QPA pilot schools and the relationship of teacher beliefs and practices to those changes. Our first task was to identify improving pilot schools.

We again use grade seven as an example to present and discuss our findings. The QPA pilot schools contain among them 45 schools with seventh grade results. Administratively, these schools are a mixture of elementary, middle, and junior high; we did not examine the differences among these classifications. The pilot school with the highest slope (most growth over time) in mathematics was Independence Middle, with a beta coefficient of 0.34. This figure suggests Independence Middle moved its successive seventh-grade classes from near the bottom of these 45 schools in 1993 to very near the top by 1997. That is a remarkable achievement.

We were able to identify 20 schools in the QPA pilot group that showed similar very strong improvement trends over time in at least one subject in at least one grade.[15] These schools are identified in the Data Sources appendix. Our plan is to compare results for these 20 schools to those of the other QPA pilot schools. We expect that the comparison will highlight differences associated with improved student academic performance.

These improving schools are a varied set. They are neither well-to-do nor necessarily high-performing schools. For example, a quarter of the students in Chaparral High in Anthony qualified for free and reduced lunch in 1993. Five years later that proportion had risen to 38 percent; nevertheless, the school's reading scores rose steadily over the same period. In rural Haddam, the median family income was $17,500 in 1990; 28 percent were unemployed or under-employed; and free lunch eligible students constitute almost 60 percent of the student body. Yet, reading and math scores have increased every year. West Middle is in the heart of one of Kansas City's poorer areas and its student body is more than three-quarters minority. Five years ago, it was one of Kansas' worst performing schools. Although its students today still score below the state average, growth in achievement has been consistent and large, particularly in reading. The work of the West Middle faculty is making a difference.[16]

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[15] Independence Middle was not retained on this list because, by far, the largest change in performance there occurred from 1996 to 1997. Its beta value dropped to less than 0.1 when the 1997 data point was dropped. Our final selection was based on both the value of beta (greater than 0.3) and the degree of fit of the regression line.

[16] Before proceeding, it is necessary to point out that the number of schools with strong positive slopes is not large. Typically, about one-fifth of the schools at each grade were found to have slopes greater than 0.2 in each subject; for seventh grade math, the proportion dropped to one-tenth of the schools. The 0.2 requirement is not that stringent, roughly equivalent to moving up the list of schools by about 8 schools

Teacher Change in QPA Pilot Schools

NCREL designed a paper-and-pencil survey for all QPA pilot schools teachers who had classroom responsibility for mathematics or language arts (including reading, writing, English, and communication skills) instruction.[17] The survey contained more than 100 multiple-choice questions directed at such issues as school mission, philosophy, leadership, community relations, staff development, instructional practice, and assessment. Surveys were returned by 875 teachers (43%) representing 114 (88%) of the pilot schools.

The survey was designed to generate a series of subscales. A factor analysis solution was implemented and 17 traits were defined.[18] We computed building averages for each factor or trait. We were interested in using the survey to identify the strength of these traits—which current research suggests are keys to school improvement—in the QPA-pilot schools, to determine whether these traits were stronger or weaker in improving schools than in other schools, and to begin to understand how such traits work to make change in schools.

Figure 4, on the next page, displays the relative importance of each of 17 traits in all 114 QPA-pilot schools returning teacher surveys. However, these school averages rarely depart meaningfully from the zero value, on constructs that scale from approximately –0.8 to +0.8 at the teacher level.[19] These small differences are not meaningful.

The QPA literature suggests that the pilot schools will closely monitor data to assess progress, have staff who collaborate, and enjoy parents committed to the school's mission. They will be schools where up-to-date instructional practices such as hands-on learning, active learning, higher-order thinking, student problem-solving, cooperative activity, and multidisciplinary instruction are in evidence. The averages in Figure 4 do not bear this out. They suggest that staff in most QPA-pilot schools are disinterested in these characteristics: they see them as neither important or unimportant.

However, these averages, as averages so often do, mask a critical difference. For this study, a critical question is, are the 20 "improving" schools different from the other QPA-pilot schools? Are staff there also noncommittal with respect to these traits?

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annually when the list contains 100 schools. Recall that these data speak to the QPA pilot schools, schools that since 1992 have been receiving considerable district and state support to analyze their strengths and weaknesses, devise improvement plans, attend staff inservices and training, and the like. That so few schools display clear trends of distinct improvement suggests that, even with these supports, most of the QPA pilot schools have not been able to put together combinations of tools and strategies that lead to significantly improved student achievement.

[17] See the appendices for a copy of the instrument, instrument design specifications, sampling, and returns.

[18] Factor analysis is a statistical methodology that calculates the shared information in a set of questionnaire items and subdivides it, if possible, into discrete components or factors. The results, if interpretable (which they frequently are not), generate a shorter list of characteristics latent in the original data. Our results, after inspection of a principal components solution and subsequently applying a maximum likelihood solution with oblique rotation, appear interpretable in all but three instances. The factor analytic solution supported our original questionnaire design strategy.

[19] The underlying scale was composed of Likert-type, "strongly disagree" to "strongly agree" items.

Figure 4

Factors that Matter in all QPA pilot schools

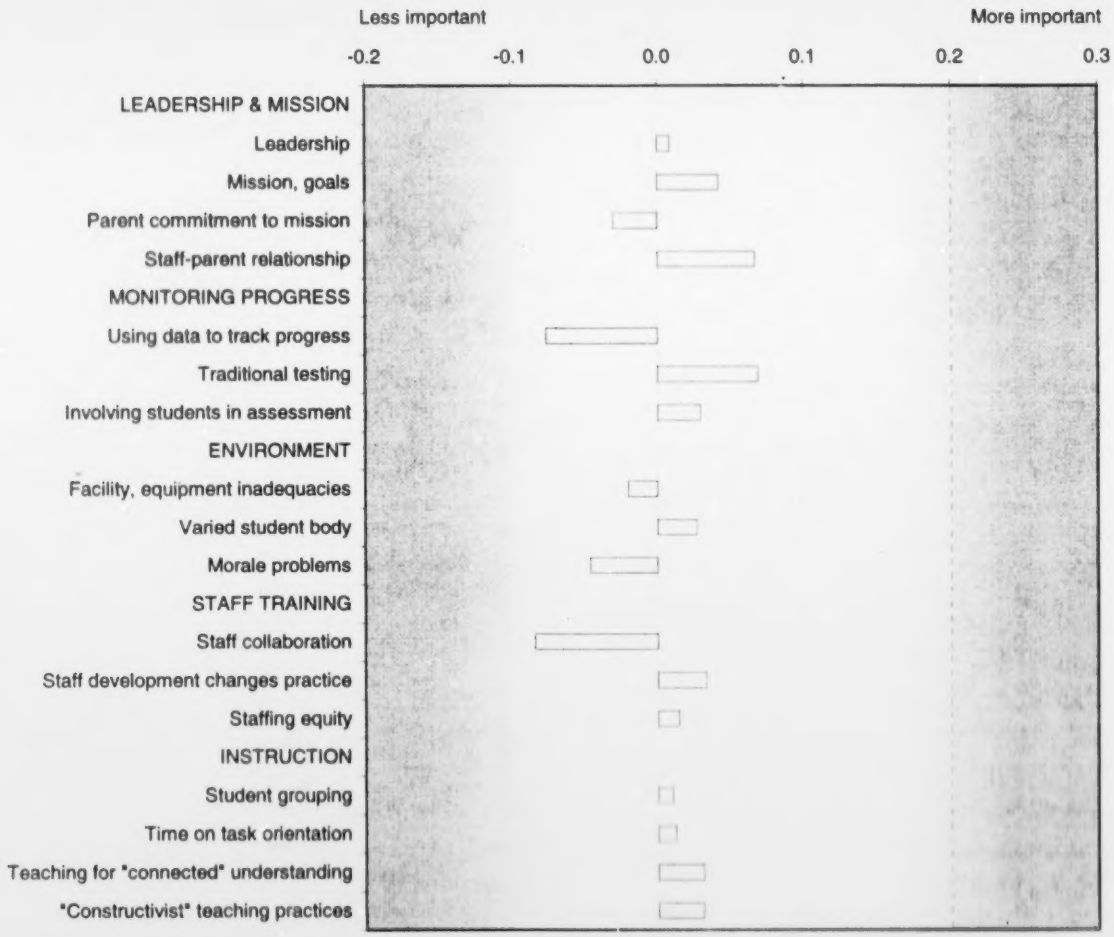

Figure 5, on page 12, demonstrates that this is not so. The 20 strongly improving pilot schools show strong positive spikes, reaching values as high as 0.25, for the following traits: school leadership, staff collaboration, monitoring progress with data, and traditional testing. The differences between these 20 schools and the other QPA pilot schools appear well worth investigating.

But, first, let's take a closer look at what teachers at the improving schools say are the influential factors in making change. Figure 6, on page 13, displays the *relative* importance of each trait.[20] Positive values indicate staff agree the traits are important;

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[20] Figures 4 and 5 reported the mean value for each trait. Figure 6 and subsequent graphs report 'effect sizes' that is, in terms of group standard deviation units (Rosenthal, 1994). Effect size comparisons are more appropriate because they are less influenced by variations in the response distributions.

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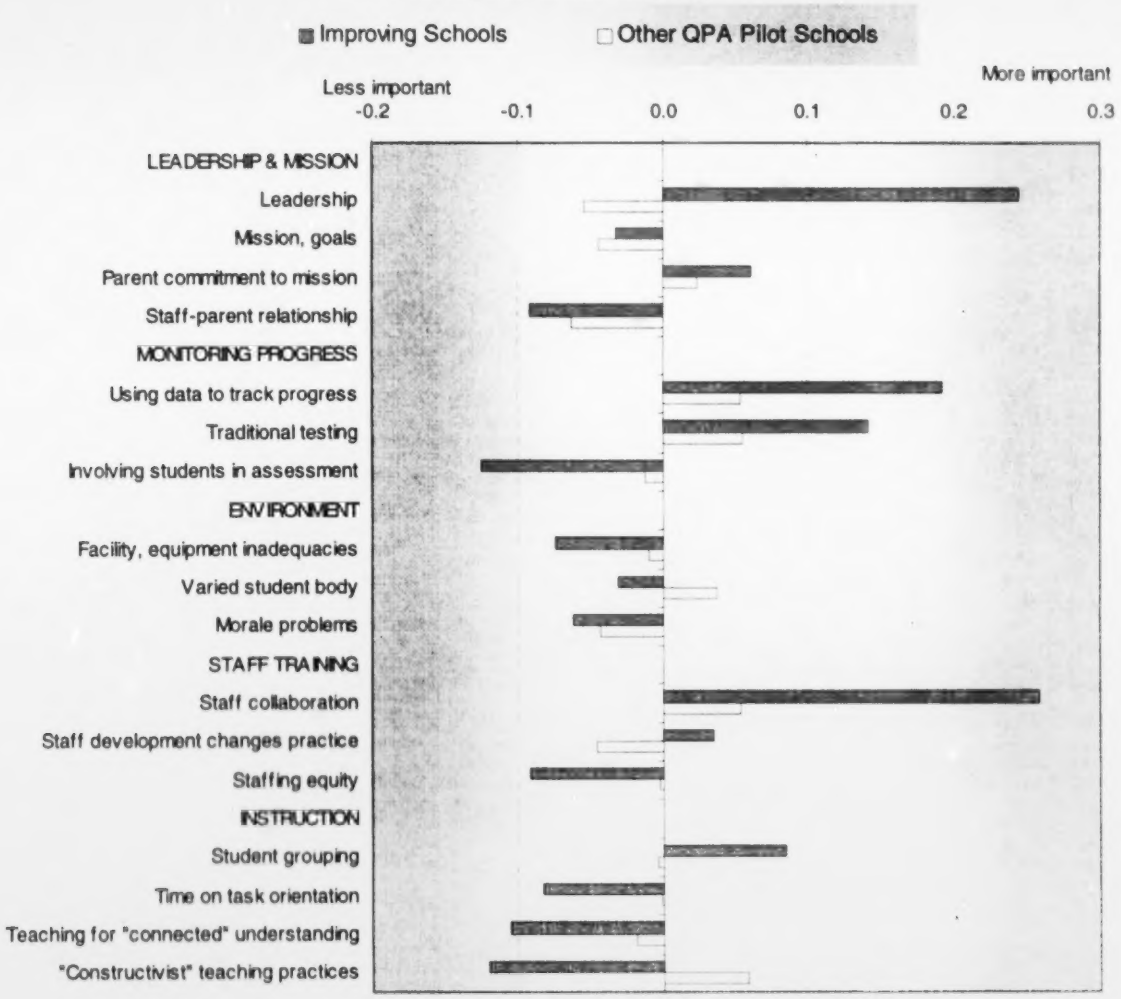
Figure 5

Factors that Matter



negative values mean staff think them of little consequence.[21] The first fact to be noted in Figure 6 is that the size of these effects is small. Many of the teachers in these schools think other factors are more important when they attempt to pinpoint why change occurs.

Nevertheless, there are several points worth making about Figure 6. The two strongest change agents on this list are instructional leadership and staff collaboration. Assessment, based on standardized tests and teacher-made classroom tests, is thought to play an important, if lesser role, in many of these schools. Grouping students by instructional level is a common and valued practice. On the other hand, these staff members clearly do not see value in the "constructivist" teaching approaches the current

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[21] An effect size of one standard deviation is generally considered meaningful. In Figure 6, no effect size exceeds about 0.3 standard deviation units.

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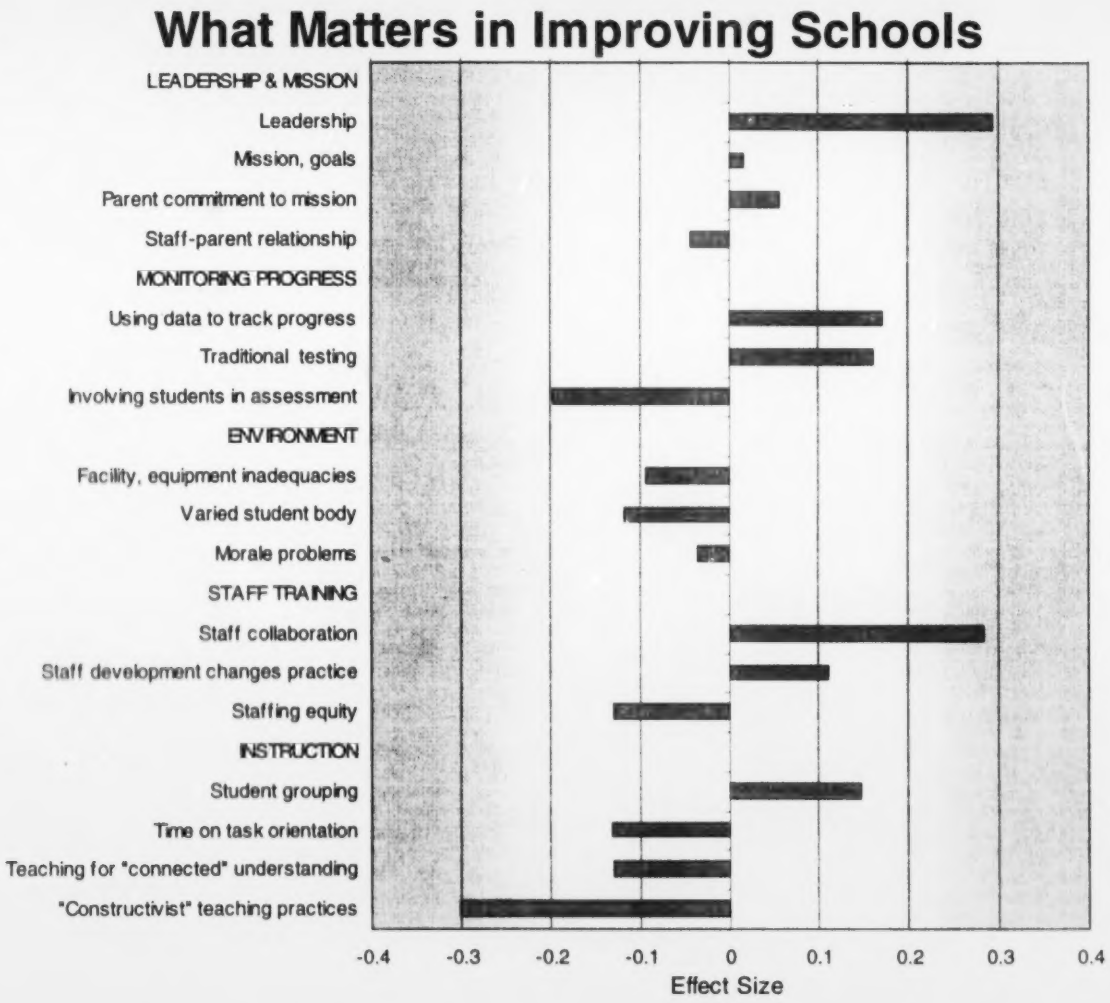
Figure 6



research strongly espouses. These approaches include such practices as active learning, higher-order thinking skills, problem-based learning, multidisciplinary instruction, experiential learning, and student collaboration. Their central principles include a focus on the process of learning (becoming a better learner), student engagement in the teaching-learning act, and the student as an active "constructor" of understanding. These teachers do accept responsibility for the success of their teaching: they do not use student characteristics, staff morale, or school plant problems as excuses for performance.

This chart begins to paint a picture of improving schools as places where staff work diligently with a high degree of focus, learning to work together, observing the effects of their work closely, gaining a belief in the efficacy of training and retraining, and realizing the importance of having and nurturing instructional leadership.

NCREL tested this perception by talking directly to teachers at the 20 improving schools. But, before turning to those conversations in the next section, it may be useful

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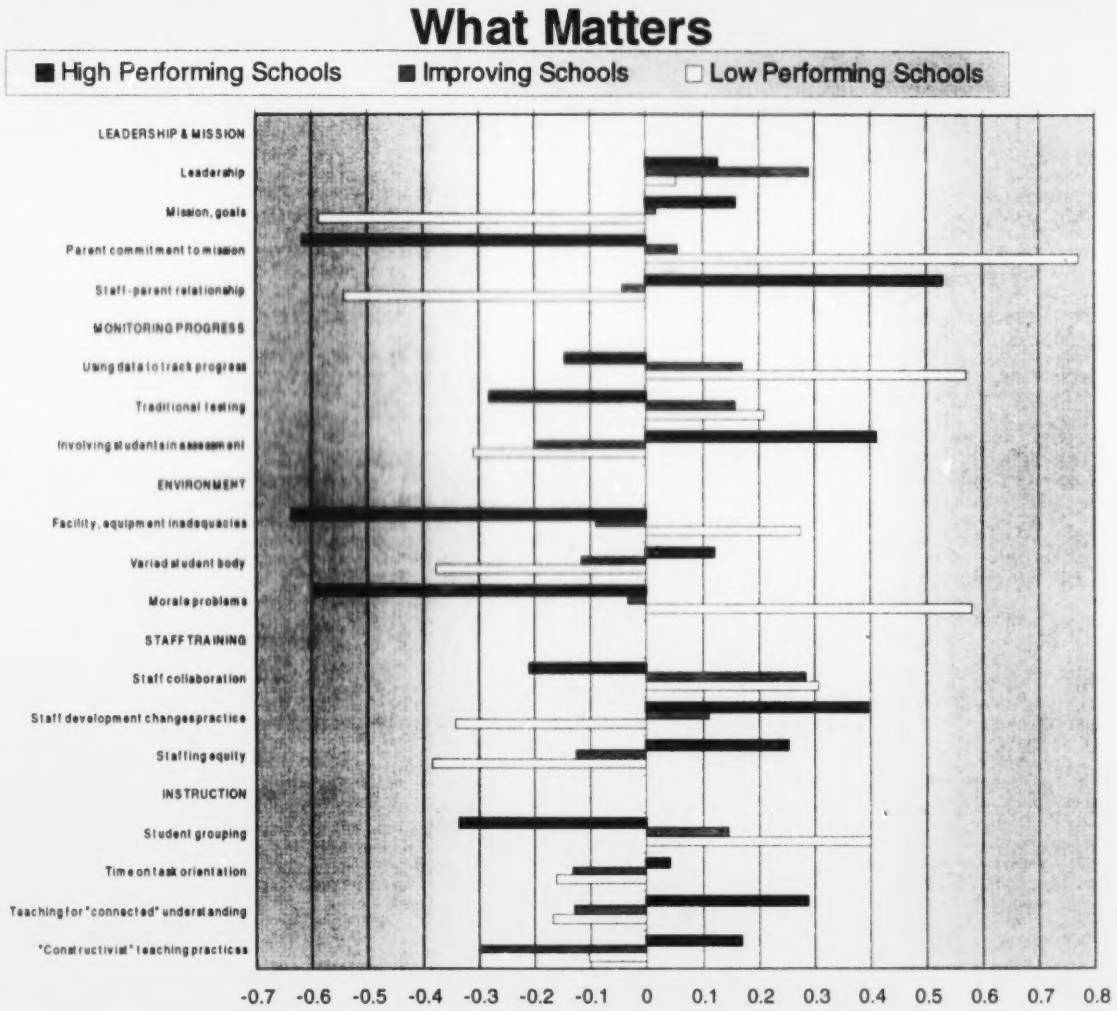
Figure 7



to ask how these patterns compare to what staff in high-performing schools, or even low-performing schools, have to say.

Within the set of QPA pilot schools, NCREL identified 17 schools that ranked at the top of the distributions in 1995, 1996, and 1997 on one or more of the Kansas Assessments. We termed these schools "high-performing." Another 22 schools were identified that performed at the bottom of these distributions in each of these three years; these we called "low-performing." Figure 7 repeats the data from Figure 6 and adds data from these two sets of schools. The differences in the profiles of the high- and low-performing schools are dramatic. The improving schools almost without exception fall into an intermediate position.

All the schools have high regard for instructional leadership. High-performing schools appear to give leadership the least importance. They *are* leaders already.

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Therefore, they may not be concerned about having, obtaining, or supporting leadership. It is there for them, integral to their lives. In the improving schools, the realization is growing that instructional leadership is necessary and must be maintained if they have it or obtained if they do not have it. In low-performing schools, the perception may be more mixed. Some staff treat leadership as an administrative task, outside the world of the classroom and therefore unimportant. For other staff, instructional leadership is unimportant because each teacher is his or her own leader: each rules a classroom and each has a closed door.

Consider the low-performing schools' strong denial of the importance of school mission or school goals. They simply are not concerned about where the school as a unit is headed; they know where they as individuals are headed and that is sufficient. Leadership and focus are not important elements—or are resisted because they require change and change is disturbing.

On the other hand, these same staff members cite the very high importance of parent commitment to school goals. If mission and goals are not important, why is parent commitment an issue for low performing schools? The answer is: because parental pressure is diminished and their support enhanced if they will more strongly support the school. Staff members realize that their schools do not have particularly strong community support, that the school exists in the community but is disconnected from it. Their lives will be simplified and they will see better student performance, they believe, if parents will support them, vote additional tax levies, get students to school on time, and encourage the completion of homework.

In the high-performing schools, parental commitment to the school mission is simply not an issue. That generalized support is or has become a given of the school-community relationship. These schools' staff moved beyond this. They are now much more concerned about how they and parents together can support and enhance children's education. The issues change from "Why don't they raise their children better?" to "We need to talk together more about how best to improve Michael's work." The focus has shifted from disconnection from the community to joint parent-teacher support for a student and how to make that work.

Staff at high-performing schools pays much less attention to traditional standardized and teacher classroom tests than staff at improving and low-performing schools. They also express less concern about using data to track progress. But, they are very much interested in getting students involved in the assessment process. They want to see what students can do, not just inspect numbers. They want students engaged in the assessment process; otherwise, they cannot see the best students can do and how they do it. The process of developing skills and generating performances matters to them as much if not more than a test result.

It is the staff at the low-performing schools who most stress using objective data to track progress. In most cases that means Kansas Assessment results and other objective, external measures. These staff members know that such measures tell them that student performance is not as good as it should be. They therefore pay careful, even fearful, attention to these indicators. What appears to be missing in these schools is diagnostic

knowledge and strategic leadership that would lead to improved instruction and generate higher performance.

These low-performing schools are apt to turn to external concerns to justify low student performance: the building is in disrepair, the students are unprepared, the administration is not supportive, the community is too demanding, morale is low, we have to feed them before we can teach them. In some instances, some of this litany of excuses may be on the mark. Nevertheless, none of them speak to change, to improvement, to doing differently or better. The teacher makes excuses and doesn't accept that he or she can make the difference.

Nor have these teachers learned to work together. High-performing and improving schools know the importance of collaboration; low-performing schools do not. High-performing schools accept that teachers can do better, that training can improve practice. Low-performing schools deny this. Staff at high-performing schools is concerned that newly hired staff fit the school community, that teacher skill and student need be well matched, that newly hired and established staff all have contributions to make. In low-performing schools such elements of collegial, professional staffing are often absent.

Staff at high-performing schools are not much concerned about grouping or tracking students for instruction. This traditional feature of schools is much more important in low-performing schools. The high-performing schools are more concerned about implementing up-to-date, research-based instructional practices; in connecting students' learning to the world outside school; and in integrating curricular elements.

The instructional practice profiles are less extreme than the other parts of Figure 7. This may suggest that the effects of six years of QPA visitations and other support processes are bringing the messages about effective teaching to all schools, that elements are being absorbed in many kinds of schools. An alternative explanation may be that teachers find change difficult under any circumstance and therefore do not grant much importance to any messages about instructional change.

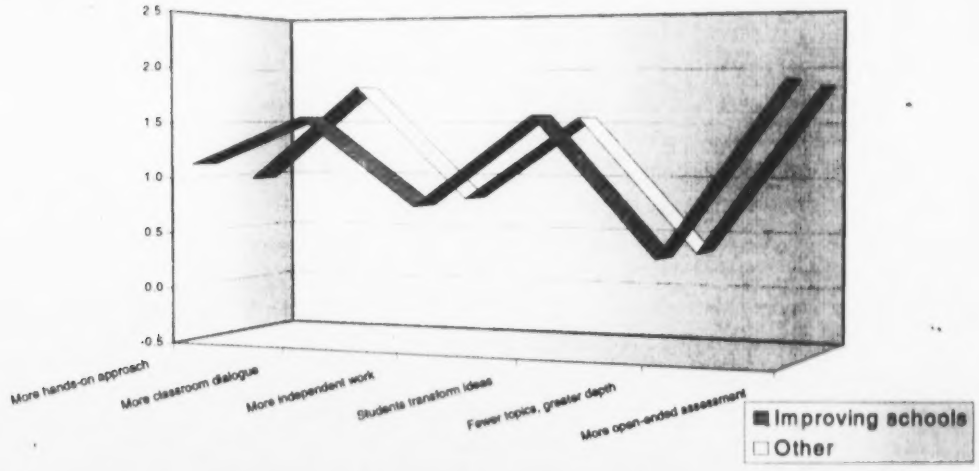
It will help to present some data on teachers' estimates of how much they have changed their instructional practice over the years of the QPA pilot. Teachers were asked to locate themselves with respect to where they stand now and where they stood at the beginning of QPA on six continua. These continua tap some of the major elements in current thinking about instructional practice. These were hands-on approaches vs. readings and lectures; increased teacher-student dialogue vs. teacher lecture; independent work vs. cooperative work; students manipulating ideas vs. students learning facts and rules; broad curriculum coverage vs. narrower but deeper coverage; and open-response assessment vs. multiple-choice. The difference between their two positions was computed, giving both the amount and direction of change.

How much change occurred? As Figure 8, on the next page, makes clear, the typical change, across all 135 QPA pilot schools, amounted to less than two points on the 9-point scale. Teachers in the pilot schools do not credit themselves with having changed much when it comes to instructional approach. What changes occurred? All movement was toward the more modern positions. The chart suggests that the largest changes were in the direction of more open-ended assessments, more student-teacher classroom dialogue, and towards classrooms that are less fact centered and more into manipulating

information and ideas. Also, note that the amount of change is the same for both the 20 improving schools and the other QPA pilot schools.[22]

Figure 8

Amount of Teacher Change,
in 20 Improving Schools and Other Schools



One interpretation of this chart is that change is occurring slowly, in directions consistent with the instructional approaches QPA and current research support. The amount of change is about the same in improving schools and all others though the level of use of these newer instructional approaches is lower in the improving schools than in high performing schools. This may represent a case of the adoption of promising practices, separated from the larger instructional philosophies to which they belong. This is consistent with teacher's well-known desire to adapt practical new techniques to their instructional repertoire, but to resist fundamental change (Cohen 1990).

What Teachers Say They Do That Makes a Difference

Whether or not speculations from survey results of the sort found in the previous paragraph are on the mark can only be tested by looking in schools, observing what happens there, and asking teachers to explain their practice. It seemed appropriate for this purpose to look closely at schools with multiple-year histories of regularly improving student academic performance. It is what teachers and students actually do together (as contrasted to what they tell us in surveys) in these *improving* schools that will tell us what makes a difference.

Frequently, it is what teachers and students in *high-performing*[23] schools do that is studied to gain an understanding of what works, what has promise, and what can be

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[22] There is also no difference in instructional change for elementary, middle, or high schools.

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transplanted to low-performing schools. It is assumed that what teachers and students in these schools do is quite distinct from what teachers and students in low-performing schools do. But, in fact, it is unclear that what teachers and students do in either high-performing or low-performing schools is the same as what is done in improving schools. We felt that we needed to be in schools and talking with instructional staff to clarify these and other issues.

Experienced NCREL staff spent at least one day at each of the 20 identified improving schools. They conducted group or focus interviews with classroom teachers, supplemented with one-on-one conversations with instructional leaders. Schools were toured and classrooms visited.

The visits focused on three sets of issues. First, we looked for evidence in conversation and in practice of the presence of the core elements of the QPA process: the application of "effective schools" principles such as a focused school mission, strong instructional leadership, high expectations, a safe and orderly environment for learning, monitoring of progress, and home-school linkages; staff training and retraining; learning community; an emphasis on high performance; world-class standards; and an integrated curriculum (Kansas State Board of Education 1995).

Second, our visitors looked for evidence of three additional elements that research suggests are particularly important but were not explicitly cited in the QPA literature. These were a constellation of school characteristics leading to increased staff professionalism, collegiality, and collaboration (e.g., Fullan, 1991); the use of recognition or incentive structures (Consortium on Productivity in Schools, 1995); and a high density of data collection and use at all levels of the enterprise (e.g., Greer, 1994; Hawkins, Sharpe, & Ray, 1994).

Third, we went in to the schools attuned to local conditions and variations. We had many questions. We wanted to know who leads and how. We studied what teaching looked and felt like. We looked for evidence to help determine if teaching and learning were established and static or open to change, adventure, and a willingness to accept some risk. We asked about how often, when, and where staff worked and talked together; and what the content of these meetings was and what their consequences were.

Although we used a protocol and had many questions, it was our intent to facilitate conversation, occasionally to guide it, but never to control it. We knew each school would provide an opportunity to see things anew and differently. We stayed alert to nuance. It was important to us that school staff tell us what mattered to them. We were not interested in their reactions to our ideas.

What did staff at these improving schools have to say to us? What did they talk about? Among the topics that absorbed the most conversational time and generated the strongest statements were the following:

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[23] A high-performing school appears at the upper end of the distribution of schools on some measure of merit over multiple years. It may or may not be improving, meaning it may or may not be moving upward in the distribution over time; however, it is not sliding downward in the distribution. A low-performing school consistently performs at the bottom of the distribution. An improving school can be anywhere in the distribution: its defining trait is that it climbs higher in the distribution each year.

Instructional leadership. The refrain from all the schools was constant: instructional leadership is an absolute necessity. Staff needed to see it, to feel it, to be reminded of it. The form leadership took varied. Some schools stressed personality: an active, in-the-classroom principal; a long-time superintendent with clear goals and strong community and staff support; a single teacher as the "soul" of the school. In other schools, a team of teachers was challenged and invigorated by the QPA process and became the core of the improvement effort. This "let's get it done" attitude seemed particularly prevalent in smaller, more isolated schools.

> *"We just kinda said, hey, let's do this. We said that's a good idea. We never met formally, it was done in the hall, in the classroom."*

As should be clear from the above, in these schools instructional leadership did not always reside in the principal or administrative leadership. In a fair number of these schools, staff drew a clear line between instructional and administrative leadership. When these lines crossed, there was sometimes resistance: "There was a big difference in how much ownership each principal let us take. You know, it was their QPA. I thought it was supposed to be our QPA."

Regardless of the form, it was the presence of the leadership that mattered. It gave focus to school improvement efforts; it was a source of energy to keep trying. It supported (or challenged) individual teachers to stay on course. In many schools, there was an undertone to our conversations that, if this leadership were removed or undercut, progress would cease. In one or two schools, the conversations grew a bit maudlin as staff recollected the instructional leadership that used to be.

Principal turnover in the schools visited was high. Several had had three or more principals since 1991. In a few schools where instructional leadership had been vested in a prior principal, the sense of past progress, the Camelot that was, was particularly strong.

Monitoring of data on student progress. Close study of indicators of student performance was reported in most of the visits. Typically, the indicators emphasized were of two kinds. Some schools stressed one or the other; some both. The first kind included the Kansas Assessment, other standardized assessments, and the QPA indicators reported to the state board. These received close scrutiny once a year, usually when interpretation was offered and strategies for improvement deliberated among the school staff and with the site councils.

The second kind was based on an analysis of the local curriculum or textbooks, generating a series of goals, and, in some cases, very detailed instructional objectives. Student progress or mastery of these objectives was recorded with high frequency. This supported continuous evaluation of the quality of the progress of individual students and, potentially, offered opportunity for remediation throughout the year. What remains uncertain, of course, is the quality of these indicators and of the objectives themselves.

Home-school relations. The relationship of the school to the community and of the teacher with the parent was talked about quite a bit in these conversations. This talk was, however, not very intense. In fact, it was usually quite complacent, occasionally self-serving. Staff remarked how parents

> *"Now, we see a lot more responsibility and the parents are much more comfortable. You don't hear that gasp at the other end of the phone when you call."*

were generally pleasant and calmly supportive when met in the supermarket or gas station or sports field. With some exceptions, of course, there was little real sense that these relations included substantive conversation on the course of schooling, the content of curriculum, the efficacy of teaching or other matters close to the heart of schooling.

Staff collaboration, collegiality. There was uniform approval in these schools about the opportunity since QPA to work together, to open their doors, to pool their knowledge, and to share their learning. This was clearly heartfelt, and in a few instances marked a significant change from past practice. Working together as adults was a treasured experience and an uplifting and invigorating one. Staff talked over and over again about how they now turned to each other for assistance, how they visited each other's rooms, how they shared knowledge of student progress and difficulty.

> *"We've learned that our ideas are just as good as any one else's. We might be a small town in Kansas, but we count. Our ideas work."*

Many pointed to the QPA pilot start-up in 1991–1992 as a source for this new spirit. QPA required them to collect a variety of data about their school, review and interpret the data, and build improvement plans. Much of this school staff did not like: not the forms, not the pressure, not the requirements, not the data elements being collected. On the other hand, in doing this, they saw their school and its output from a new perspective. In some instances, this caused staff to realize that their school did have a problem and that they, the teachers, constituted the primary resource to resolve the problem. Under the proper conditions, this realization produced a team spirit, a shared willingness to take some risks and make some changes, that over time converted to a collaborative approach to school improvement.

Staff also talked about staff development and training: how it was becoming for them more selective and more relevant, creating change more often. In the past it was more an excuse to leave the classroom for the day. Curriculum integration was a major topic among these schools. This was something these teachers want to do, but they remain uncertain about how to do it well. The chant of high expectations for students was frequently heard, but like the conversation around relationships with parents, it seemed to have less substance and to be of low intensity.

> "We've always expected them to do well, and, if not, we reteach it, and they usually do. This has been our expectation forever."

What did staff in these improving schools not talk about? Given its emphasis among the QPA elements, there was very little conversation among teachers about school focus or school mission. Principals and superintendents brought this into the conversation almost immediately. But, for teachers, the school mission statement often appeared to exist in a faraway land. On the other hand, the teachers in most of these improving schools were clearly focused on their immediate instructional goals and tasks. These goals and tasks were usually specified in some detail in terms of curriculum coverage and student expectations. One interpretation of this may be that these teachers' professional universe remains mostly limited to their classrooms and their specific students' needs. They may not yet have learned to see beyond that, to encompass the more general needs of the student body as they prepare to go out into the world and to address the school's role.

Frequently, conversations with teachers lead to lists of things that get in the way of teaching. These include societal ills such as poverty or delinquency or parental nonsupport, social problems exhibited in students, facility problems, or insufficiency of support or supplies. These may be cited as problems to be overcome or constraints on the current level of performance. However, these elements rarely entered our conversations in these improving schools. These teachers tend not to blame conditions outside the schools for the performance (or lack of it) they engender in students. Rather, they express appreciation for the support of principals, superintendents, and others in helping to overcome such obstacles. Many of these schools were small and rural, where, despite poverty, the kinds of social problems evident in large urban centers are less often seen. Yet, even during our conversations with staff of improving schools in poorer parts of Kansas City or in Junction City, these issues rarely intruded.

Extended conversation about incentive systems or formal recognition structures rarely took place. When they did, they were usually instigated by the NCREL researchers. There were two exceptions. At several schools, staff talked freely about how much they appreciated staff development "points." These points are awarded for going to inservices and other training sessions. Additional points are sometimes awarded for sharing the learning at the home school. In a few schools still more points could be earned if a teacher with whom such learning was shared began to use the new technique. This method of "pushing" change based on self-interest has some merit, particularly if the learning is based on good research and true best practice.

A second exception was more subtle. Staff not infrequently gave each other accolades for jobs well done, learning shared, tips given, hours put in. This kind of mutual reward and support helps build collegiality, even as collegiality creates opportunity for the giving that makes such accolades possible.

Changes in Instructional Practice and Support

The teacher survey data suggested there had been changes in classroom instruction but that the amount of change was small. In conversation, the teachers seem to concur. They talked much more about monitoring progress and linking instruction to student need than they did about changing classroom practice. Teachers not infrequently seemed nonplussed about our statements that their schools had shown considerable improvement each year for over half a decade. As a principal of one high school put it, when presented with a five-year graph of data showing his school's steadily improving reading and mathematics performance, "There's been some change [in instruction], but not enough to account for this." This begs the obvious question, what else changed that made the difference?

Textbook changes occurred with considerable frequency early in the QPA pilot process for many of these schools. More important, textbook adoptions are now looked at much more rigorously and by more staff at these schools. Said one teacher, "We control the curriculum and we buy the book that meets our curriculum. Our curriculum is not dictated by the book and that has been a turnaround here. We design what we think is important, then we go looking for the company that has the book that has that."

From the teacher's perspective what is important in many of these improving schools is an objectification or rationalization of the curriculum. Where it once was not written, now it is. Where it once was brief, now it is detailed. Where once it was handed out by administration, now it is designed by staff. From the teacher's perspective, these changes have little effect on the "how" of teaching but quite a bit on the content of teaching. In the words of one teacher, "We [now] do a lot more comprehension questions and talking about books instead of just reading them. We do a lot more main idea and detail than before. I do a lot more science teaching, teaching nonfiction books than I used to."

Curriculum rationalization has several other consequences. Implicit in the comment of the teacher just quoted is curriculum integration: the reading teacher teaches some science. This is difficult to do if the curriculum is not clearly defined. Curriculum coverage assignments are clearer and more sharply delineated, and can be mixed in novel new ways: "I teach a language arts segment, a math segment, and a social studies segment. I'm concentrating on three areas which is a lot different than what I used to do," explained one teacher. Assessment is more focused and more frequent. Teachers' knowledge of student progress is sharper and more frequently adjusted.

Staff development programs also gain utility. One change has been a shift in emphasis from meeting individual needs to meeting needs linked to school improvement goals. Reviewing the kinds of inservice staff talked about attending and valuing, there seems to have been a movement from past activity-driven staff development to the current results-focused emphasis, emphasizing core curricula and strategies teachers can use immediately and directly with students. By activity-driven, we mean workshops that proposed complete solutions to specific instructional problems. These required learning a relatively large repertory of classroom skills and then adapting them to work in the home-school context. The staff development now favored addresses larger topics relevant to school goals but provides smaller-scale strategies that are more easily adapted and implemented. Such training was sometimes described as discussion led by an issue expert supported by classroom teacher-led group generation of solution strategies.

The requirement at some schools that teachers share and demonstrate to colleagues what they have learned has also helped to focus the energy of attendees, just as it helps assure the selection of relevant training. Teachers accept they are now more accountable for building their own capacity and directing their own growth. This acceptance, of course, is also an ingredient of heightened professionalism and staff collegiality, which in turn supports a more collaborative school environment.

Teachers in these improving schools recognized two specific instructional innovations repeatedly as having had impact on student performance. These were the six-trait writing and Accelerated Reader®. Six-trait writing is one of several similar schemes for teaching the writing process and evaluating its results. Typically, these methods define a list of writing elements, present guidelines for teaching each element, and include an evaluation rubric to assess students' work. A well-known example comes from the Northwest Regional Educational Laboratory (NWREL) (Steineger, 1996; Stiggins & Spandel,1996). The six traits in this version are ideas, organization, voice, word choice, sentence fluency, and conventions. Each trait is assessed on a five-point scale. The package available from NWREL includes example scoring documents, teaching guides, and online support.

Kansas Board of Education staff recommends this or similar trait writing processes to many schools during their QPA accreditation visits.[24] These models have much to recommend them. They add a significant amount of objectivity to a particularly subjective teaching and assessment task. They provide a consistent set of themes to carry over the grades as writing becomes more varied and complex. The NWREL model, in particular, is well thought out and has a rich and varied practice base. It makes sense and eases the teaching task. However, hard research evidence to support the effectiveness of these trait writing models does not exist.

A second instructional adoption common in these improving schools is Accelerated Reader, a record-keeping system for reading from the Institute for Academic Excellence. This computerized reading management program is designed to provide motivation and accountability in reading a variety of books. The process begins when the student selects a book to read from a collection of over 8,000 titles. After the book is read, the student takes a computerized test to assess comprehension. Based on the book's difficulty, the student's skill, and the test results, the computer awards points to the student. The student can cash in or retain these points against a variety of incentive awards.

This software can provide the teacher with a variety of reports on individual or groups of students as to what they have read and are reading, and on their level of mastery. This clearly increases the information teachers have on students. In most schools the program does lead to students reading more books—if for no other reason than that more books are suddenly available and the teacher is requiring the reading.

The Accelerated Reader supporting materials suggest that teachers should set aside 30 to 60 minutes each day for classwide individual reading, kindergarten through Grade 12. It is recommended that the teacher also be reading during this time. While the benefits of this can be argued, for some teachers it presents a quiet time during which other (or no) work may be done. The Accelerated Reader also puts the classroom computer to use. In instances where incorporating the computer into classroom life is problematic, Accelerated Reader provides a handy justification.

That the Accelerated Reader can increase the number of books students read is not in doubt. Whether such reading by itself will increase student academic performance is an open question. The research base for the effectiveness of the program is extremely limited, mostly based on very small samples, and fraught with methodological problems (Mathis, 1996; McKnight, 1992; Paul, VanderZee, Rue, & Swanson, 1996; Peak & Dewalt, 1993; Turner, 1993).

If research cannot support these innovations, why do teachers in improving Kansas schools choose them and claim them successful? In part, because the advice of people they trust—typically other teachers in nearby schools or districts—supports these adoptions. Most teachers do not read the technical research literature: no wonder, since it can be dull and difficult reading.[25] Teachers listen to their colleagues and to speakers

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[24] In addition, it is well-known that the Kansas Writing Assessment is scored using a similar trait-based rubric.

[25] Professional journals for the educational research community, such as *Educational Researcher* and *Educational Measurement*, feature frequent, unsuccessful discussions to redress this state of affairs success.

at symposia, and they receive mail from educational marketers. It is from within this circumscribed arena of awareness that they must work to select the tools and techniques to create improved schools. They, like most of us, will give greater weight to less-than-the-best advice from a trusted source than to excellent advice from an unknown source.

NCREL's school visitors felt that the teachers and administrators they met and interviewed in Kansas had, with a few exceptions, a basic grasp of data analysis—how to read it and how to use it to make decisions about classroom practice. However, virtually all faculty felt strongly that the data they were asked to use in improvement planning did not yield useful information. Teachers say the Kansas Assessment measures too infrequently: each student over his or her 13-year school career can expect to be tested four times. This, teachers argue, tells them nothing about how their students' performance changes in response to instruction. If data are to drive instructional change, they must speak to teachers' needs from teachers' perspectives.

The data generated by the six-trait writing rubrics or the numbers that leap off the pages of Accelerated Reader printouts do meet teachers' real needs. Teachers feel they understand these and how they link to classroom performance and instruction. This is also how they feel about their own classroom tests and, in some larger districts, locally developed criterion-referenced tests. These are all fairly frequent measures, clearly tied to instructional content and delivery, and appear to measure student performance against specific standards of accomplishments. For teachers, the psychometrician's response that these measures are unreliable, that they are of uncertain domain coverage, that they are not comparable, that they cannot be aggregated—the list goes on—is irrelevant.[26]

Two Case Studies

Before we attempt to summarize these findings, it may prove useful to examine two schools in more detail.

Haviland

Haviland is a rural town of some 1,000 people in south-central Kansas. Informal, continuous communication and contact ties the town together and sets the tone for school improvement efforts: "Not everybody gets a [school] newsletter," said one teacher, "but we all go to church together, we all see each other and go to ball games together."

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[26] Sometimes this continual talking past each other exhibits itself as a total failure to understand. For instance, at two schools, when we presented time-series graphs depicting the steady improvement these schools had made, the response was one of denial or disbelief. As one principal, focusing on differences between individual data points and not on the overall trend, put it, "There's been some change in [instruction] but not enough to account for this. Whenever it drops, it doesn't mean there's been a drop in teaching effectiveness." A principal of a small school argued, "If you [have] a sample that is so small you have one 'out,' that just completely shoots your average. While the whole class may be doing well, one person has trouble [and] then it looks like all of a sudden everybody's struggling—and that's not the case." Neither principal is incorrect in detail, but both refused to look at the long-term trend (where the meaning of the signal is), preferring to focus on short-term data inconsistencies (where the noise is).

Haviland is home to Barclay College, an ecumenical Christian school of theology. Many parents, teachers, and administrators are Barclay students or alumni. This common thread, combined with the stability of a small community, unites school stakeholders through shared values, priorities, and experiences. A common purpose is apparent in the way community members talk about what they want for their schools and their students. Teachers find that informal, day-to-day contact with students outside of school is one effective way to help parents monitor and support children's academic performance.

On the other hand, Haviland schools' staff was less specific than many other faculties about discrete practices, procedures, and strategies used to support student achievement. This is in part because Haviland perceives little need for a formal process of strategy determination. It is not that the district lacks an accountability system or strategic planning, but rather that individual teachers feel free to try new methods in their classrooms as needed and to retain what works for as long as it works. The district's Curriculum Coordination Committee is very open to new models—without prespecifying them.

Barclay College is clearly central to Haviland's sense of community. Its presence and the extent of many community members' connections to it and each other contribute to the sense of trust that permeates the town and the school district. This cohesiveness and trust foster a more organic sense of community, one where common sense and common values supersede statistical information and formal process. School improvement is therefore both an individual and community involvement, requiring little formal process or articulation.

Atchison

With the opening of Atchison Elementary School in September 1997, five elementary schools were consolidated into one in this northeastern Kansas river town. According to NCREL's analysis, at two of these five schools third- and fourth-grade students had shown trends of significant increase in performance on the Kansas Assessments since 1993.

Three years ago, district leaders pushed all the schools to join the QPA process and rallied the community to build a single state-of-the-art elementary school. Teachers and administrators talk of the role of QPA in bringing everyone together around a common focus, permitting the growth of team spirit and collaboration even before all faculty shared the same building.

Atchison's schools, like many other Kansas schools, had a history of school improvement efforts that predate QPA. Nevertheless, QPA provided challenges and tools that produced a positive overall influence to stimulate change and continued improvement. Teachers assumed more of an instructional leadership role in their buildings. As one teacher said, "When I taught here 15 or 20 years ago, your curriculum was whatever was in the reading book or the math book. Now, we've taken an earnest look at what we need in our curriculum and found the books and the materials to match that." QPA improved staff retraining: "We didn't do whatever was

"QPA makes you pay attention."

the new topic," said one teacher. "We decided on something we needed to work on with the students and did it."

The new school was opened with teacher collaboration in mind. Each grade is organized in pods, with classrooms in a circle with a common teacher planning area in the center. The schedule includes time for cooperative planning. There are currently variations in the use of this time and space between grades and teams, but the arrangements are new. There is a tone of respect, of pulling together, and caring, and a belief their new and larger school home will work out well.

Conclusion

This study responded to two questions:

1. What do longitudinal data show about changes in student academic performance in the QPA pilot schools?
2. What key factors contributed materially to the changes in pupil academic performance in the QPA pilot schools?

Of these two, the second is the more interesting question, and this study has focused more effort there.

With respect to Question 1, this study finds that the progress in academic performance of students at the QPA pilot schools since 1992 is on a par with the progress of students at schools not included in the pilot.

Although a measurable fact, this statement is not particularly meaningful or informative. The comparison of QPA-pilot schools to all other schools in Kansas is problematic. The pilot schools are not a random sample and therefore the preceding generalization is dangerous. The pilot schools (were) volunteered to codevelop the QPA process with the Kansas State Board of Education. Some of the schools wanted to be part of the development process; some did not. Some had school improvement projects, sometimes of long standing, under way; others did not. Most were pleased with the promise that they would subsequently receive accredited status.

All Kansas schools are now part of the QPA process. In fact, the process was phased in during the time period studied. If QPA makes a difference, all Kansas schools, not just the QPA-pilot schools, benefited from it. It can in fact be argued that the pilot schools, as early entrants and codevelopers with the state, may have suffered in the initial learning process, whereas nonpilot schools benefited from the pilot schools' experience.

With respect to Question 2, this study finds that, in pilot schools where there was marked growth in student academic performance, a cluster of characteristics of faculty behavior can be identified. These characteristics vary in their importance in low- and high-performing schools.

In addition, the study makes it clear that the requirements of QPA caused some schools to begin working to improve. However, many pilot schools showed no noticeable improvement, so QPA cannot be viewed as a sufficient condition. Nor is QPA a necessary condition in all schools. Some of the improving schools had a process in

place prior to QPA, and one improving pilot school gave only very cursory attention to the process.

A theme alluded to over and over again by staff at the improving schools is one of basic common sense: A school and its staff must recognize there is a problem. In many of these schools it was the QPA pilot process that caused a team to assemble, to collect data, and to attempt to interpret the data. From this work frequently came the shared realization that a problem existed. Staff also must also accept that they can "fix" the problem. Teachers in improving schools spoke proudly of how they brainstormed solutions, visited neighboring schools, turned to professional journals, and tried alternatives. They were pleased that principals and boards encouraged these explorations.

A third element is the shared aspect of these recognitions. Staff took pride in how they worked together, whether as formal teams or as part of hallway conversations between classes. Working together, the problems became "fixable," whereas seen before from an individual's perspective, they were beyond reach.

Seeing a problem, realizing it could be resolved, and working together were key elements in improving schools. But this did not guarantee good decisions or improvement. The study shows that staff, even in improving schools, often have limited horizons. From the perspective of the classroom, the risks in expanding those horizons and in implementing locally what can be seen at a greater distance are daunting.

Staff members need a variety of supports: from each other, from school leadership, from the district, from other agencies. Collegial, collaborative, trust-based relationships support change. A schoolwide focus on instruction and strong instructional leadership help knit the work together. Opportunities to seek and take training that fits the overall sense of school direction must be continuously provided. When these opportunities are provided, change happens—as the data from this study strongly confirm.

This study also suggests that high-performing schools and improving schools are strikingly different places in terms of what teachers believe and understand. These differences suggest that teachers at improving schools, over time, move closer to the mind-sets of teachers at high-performing schools and away from the fixation on problems and externals that dominate teachers' thinking at low-performing schools.

However, the kinds of instructional practices research finds effective and that are widely adopted at high-performing schools may not fit well into the understandings and habits of work of teachers at improving schools. Transplanting best practice from high-performing to lower-performing schools is unlikely to be successful. Teachers must be prepared; they must reach a stage of risk taking and vision that permits them to understand these practices as solutions to the problems they see. Reaching this stage may require time for some trial and error, wrong choices righted, and a period of small successes to reach the level of professional confidence required to truly make change.

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A REPORT ON RESULTS ACHIEVED BY SCHOOLS THAT PILOTED THE KANSAS QUALITY PERFORMANCE ACCREDITATION SYSTEM

VOLUME II
Technical Appendices

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December 1997

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APPENDIX A

DATA SOURCES

DATA SOURCES

QPA Pilot Schools

We used data from 130 of the 135 QPA pilot schools in this study. One hundred thirty-five schools in 48 districts volunteered in the early 1990s to work with Kansas State Board of Education staff to co-develop the Quality Performance Accreditation system. Since then, one of these schools has closed. Three were parochial schools. For one school we received particularly incomplete data from KSBoE; this school's data on the National Center for Education Statistics' Common Core of Data database was also deficient.

Of the 135 schools, 15 chose to delay their participation in the pilot process to Phase II, two to Phase III, and three to Phase IV. These schools were:

Atchison County Community High
Great Bend High
Junction City High
Leavenworth High
Osage City High

Atchison County Community Middle
Dodge City Middle

Healy Elementary
Lincoln Elementary
Osage City Elementary
Riley Elementary
Washington Elementary

Burlington High
Healy High
Kapaun-Mt. Carmel High
Neodosha High
Washburne Rural High

Heller Elementary
North Lawn Elementary
Park Elementary
Southside Elementary

Despite the delay in participation in the pilot, we retained these schools in our analyses. Removing them resulted in a pool of schools too small for this study. Two of these schools it should be noted, despite their delay joining the QPA pilot, were identified as improving schools and included in our site visits.

Parochial Schools

We excluded parochial schools from this study. Data for non-public, including parochial, schools are generally less available and less accurate than for public schools. Only three parochial schools were included among the 135 QPA pilot schools.

Document Review

The Kansas State Board of Education transmitted copies of all QPA-related school documents in their possession for the 135 QPA pilot schools to NCREL in early August 1997.

NCREL staff conducted a content analysis of each school's file. Those documents included school improvement plans, school annual reports, school profiles, QPA site visit reports, and QPA accreditation recommendations. Not all documents were available for all schools. The files were analyzed for evidence of the following components as well as the quality of the effort to address the components: data use; progress on student outcomes; strategic focus and approach; collaboration; staff development and skill enhancement; resource adequacy and augmentation of resources; alignment of curriculum, instruction, and assessment; and instructional treatments.

Principal's Narrative Histories

Principals of the 112 Phase I QPA pilot schools in late August 1997 received a request from NCREL to write a brief narrative history of their school's progress since 1991, with a focus on the impact of QPA. Telephone calls to nonrespondents were placed the first week of September 1997. The Kansas Commissioner of Education also sent a letter to all principals informing them of the importance of this study and encouraging principals' participation. In total, 80 histories were received, a return rate of 71 percent.

The survey requested principals to outline their school's experiences from fall 1991 to 1997. The history focused on the most important events and developments that shaped the instructional process at the school during that period, particularly as influenced by QPA. To guide their thinking, the principals were asked to focus their thoughts on and respond to eight broad areas: the events, developments, factors, and changes accounting for differences since 1991; instructional practice and leadership; curriculum development and alignment; assessment; professional development; decision making, planning and implementing change; and use of external resources.

NCREL staff reviewed and transcribed these 80 histories, which typically ran to about three pages of text. Direct staff review was supported by a computerized textual analysis.

Teacher Survey

NCREL intended the teacher survey for all classroom teachers in the QPA pilot schools responsible for mathematics or reading instruction in elementary schools and all teachers responsible for mathematics courses or such courses as English, literature, English language arts, and writing in high schools and departmentalized elementary or middle schools. Although teachers of other subjects clearly influence student academic performance, our primary student performance measures were for these areas.

The Kansas Board of Education could not provide us with an estimate of teachers of these subjects for each school. We therefore applied the following rules to estimate the number of surveys to send to each type of school:

- In elementary schools, we sent a number of surveys equivalent to 90 percent of all teachers.
- In middle and junior high schools, we sent a number of surveys equivalent to 50 percent of all teachers if the school employed more than nine teachers and a number equal to the number of teachers if the school employed nine or fewer teachers.

- In high schools, we sent a number of surveys equal to 33 percent of the number of teachers.

We based the number of teachers employed at each school on school year 1995-96 data as reported in the *Common Core of Data* database from the National Center for Education Statistics. This source gives a total of 3,520 teachers in the 130 QPA pilot schools, of whom we calculated 2,057 to have reading or math responsibilities. This is almost certainly an overestimate of the target audience. We distributed 2,300 surveys to these schools.

We received and processed 875 surveys, of which 868 were usable, from 114 schools. This is equivalent to a 42.5 percent return rate based on the target distribution and total return, and a 24.9 percent return based on the total number of teachers in these schools. Either of these is respectable for a real-world sample survey, without follow-up.[1] On a school basis, the return rate calculates to 88.4 percent.

Schools Visited

Based on longitudinal results from the Kansas Assessments, NCREL identified 20 schools from among the QPA pilot schools that showed strong positive trends (slopes greater than 0.3) in mathematics or reading from 1992 through 1997 on the Kansas Assessments.

NCREL staff spent at least one full day at each of these schools, conducting focus groups and individual interviews with teachers, principals, and district staff. All interviews were recorded and transcribed. Staff wrote field notes and interpretive summaries, after a debriefing session with the principal investigator. Computerized textual analysis of the transcriptions supported the analysis. The schools visited include:

School	*School District*	*Location*
Chaparral High	Anthony-Harper	Anthony
Martin West Elementary	Atchison County	Atchison
Washington Elementary (now consolidated into Atchison Elementary, along with Martin East)		
Cummings Elementary*	Atchison County	Atchison
Effingham Elementary	Atchison County	Effingham
Lincoln Elementary	El Dorado	El Dorado
Ellsworth Elementary	Ellsworth	Ellsworth
North Central Upper Elementary	North Central	Haddam
Haviland Elementary	Haviland	Haviland
Haviland High	Haviland	Haviland
North Reno Elementary	Nickerson	Hutchinson
Nickerson Elementary	Nickerson	Hutchinson

[1] Due to the study's very short timeline, no systematic follow-up reminders to increase the return rate were mailed. However, the site visitors and the NCREL staff doing follow-ups on the Principal History surveys did question and remind principals about the teacher surveys. Kansas Board of Education staff also requested schools to complete the surveys.

Johnson Elementary*	Stanton County	Johnson City
Stanton County Middle	Stanton County	Johnson City
Johnson High	Stanton County	Johnson City
Sheridan Elementary	Junction City	Junction City
West Middle	Kansas City	Kansas City
LaCrosse Elementary	LaCrosse	LaCrosse
Lyons High	Lyons	Lyons
McLouth Elementary	McLouth	McClouth
Mattie O. Haskins Elementary	Pratt	Pratt
Pretty Prairie Elementary	Pretty Prairie	Pretty Prairie
Ruppenthal Middle	Russell County	Russell
Williamsburg High**	West Franklin	Williamsburg
Yates Center Elementary	Yates Center	Yates Center

* Schools visited but not identified as "improving." ** Not visited

QPA Indicators

NCREL's proposal planned to make extensive use of the QPA indicator data. All QPA pilot schools each year were to report data on: attendance and membership, student satisfaction, IEP data, staff development, violence against students and staff, suspensions and expulsions, crimes and felonies at school, mastery of algebraic concepts, high school graduation, and advanced math and science course passing.

Kansas Board of Education staff willingly shared their data files with NCREL. The table below lists the number of schools with usable data entries by field for the two most recent years. There should be 134 schools reporting. Several things are apparent. The 1996 data are considerably more sparse than the 1995 data. Earlier years are nearly devoid of data. The 1995 suspension, expulsion, and violations data are suspect. In general, one would expect such data only for high schools, possibly junior high or middle schools. The dropout data for both years is similarly suspect.

Table A1. Number of Schools with QPA Indicator Data

	1995	*1996*
Suspensions	126	46
Expulsions	126	46
Violations against students	127	47
Violations against faculty	126	47
Advanced math	42	0
Advanced science	42	0
Dropouts	78	81
Students continuing their education after graduation	41	40

When we examined the actual data values, it became apparent that in many instances, district level data were being provided for all schools in the district, regardless of level or whether the individual school contributed to the data element. Our conclusion was that these data require considerable editing and cleaning before they can be used.

In addition, the time series of these data is far too short for meaningful analysis. Most fields have entries only for the two years tabled. Two data points do not yield acceptable evidence of trends.

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APPENDIX B

TECHNICAL ISSUES

TECHNICAL ISSUES

Unit of Analysis

The data used in this study comes from a variety of sources, or levels: from individuals (surveys and interviews), from groups (focus groups), from buildings (QPA indicator data), from grades within buildings Kansas data), and from districts (some Census and NCES data). This mixture presents a series of analytical and procedural problems.

However, the questions to which this study responds speak to only two levels: students and schools. Student-level data were not available to this study. In consequence, NCREL's analysis focuses almost exclusively on the school level. This seems appropriate: the thrust of QPA is school improvement, as evidenced by improvement in student academic performance. The QPA program is categorized by five basic components: effective schools principles, a learning community, staff training and retraining, emphasis on high academic performance, world class standards using integrated curricular instruction (Kansas State Board of Education, 1995). These components are all defined in terms of the school as an organization. It is the school that is seen as the generator of improvement, its faculty working together smoothly and collegially, constantly upgrading their capabilities and orientation.

NCREL is aware that modern statistical techniques can accurately model "nested" behaviors such as those incurring in schools: pupils within classes within grades within schools within districts (Bryk and Raudenbush, 1992). These tools require considerable skill on the part of the analyst to operate, generate results that are often difficult to present clearly to lay audiences, and, most critically, require greater data density (i.e. more cases per "cell") than available in many of Kansas' small schools. NCREL chose therefore to focus on simpler techniques based on school-level procedures.[1]

NCREL's choice is also consistent with a well-established line of research that focuses on the value added by an organization to its "product." In education, this concept is usually applied to whole schools or to grades within schools. University of Chicago professor Robert Meyer (1995) is a key proponent of one form of this approach. The Dallas Public Schools annually award schools for improvements in student performance based on a complex school-level regression analysis of student academic performance results (Dallas Public Schools, 1997). The state of South Carolina has a history using similar processes to structure rewards and incentives (Mandeville, 1988).

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[1] There have been commentaries in the technical literature that complex multi-level models, while theoretically more appropriate, in practice generate results not distinguishable from conceptually simpler models (Webster et al., 1997).

It is not NCREL's intent here to suggest these agencies' choices are optimal, but rather to stress that the choice of the school as the primary level of analysis is reasonable and appropriate and can take a variety of forms.

The Kansas Assessment Program

The Kansas Assessments play a critical role in our determination of student academic performance. However, two issues about the comparability of scores from the Kansas Assessment confronted us: varying domain coverage over time and non-equated results from year to year. Conversations with Dr. John Poggio of the Center for Educational Testing and Evaluation at the University of Kansas, who guides the development of the Kansas Assessments, confirmed our own investigations that these problems are present and meaningful.[2]

The term "domain" is used by test developers to speak of the content areas being assessed. The Kansas math assessments contain three core domains: reasoning, problem solving, and computation. Earlier versions of the math assessments also contained scales for estimation, communications, knowledge base, concepts, procedures, calculator use, and performance items. Except for estimation, these scales were eventually rolled into one or another of the three core domains.

The 1991 pilot assessment results would not be useful in this study, if only because not enough schools participated. The reading tests, from 1993 on, according to Dr. Poggio, were consistent in domain coverage and should meet the needs of this study. Dr. Poggio also agreed that constructing standardized measures in each of the three core mathematics domains should be possible and should provide reasonably consistent domain measures from 1993 onward, at least for our primary purposes which focused on identifying outliners (improving schools). He cautioned, and we agree, that the Kansas Assessment data in this form cannot support intensive metric-sensitive analyses of the entire distribution of data (Poggio, 1997).

We chose to build, for each year from 1992 to 1997, three math measures, for reasoning, computation, and problem solving. These are the same domains as the math scores currently reported. For the latest assessment years, our standardized measures function essentially identically to those reported by the Kansas Assessment; for the earliest years, the weighting of the various subcomponents of the domain will cause our measures to vary somewhat from those reported for the Kansas Assessment.

The second issue to be faced is the lack of comparability of results over time. Consistency of scoring levels from year to year was not a concern during the early development of the Kansas assessments. Equating procedures were not applied. The need for a more comparable measure over time has recently become more evident and is

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[2] Our experience with state assessment programs elsewhere has taught us that these two issues are usually at the forefront of development. Most states want scores that are comparable from school to school and from year to year.

beginning to affect the way the test is now constructed. Common items are being carried over. Some subscales from prior years are being repeated intact.[3]

The incomparability of scores over time makes it difficult to sense if performance is rising or falling. Yet, that is what we need to know to be able to answer the study's first question, "What do the data say about changes in student academic performance over time?" The six figures on pages B-4 and B-5 following present time-series displays of the reading and math results by grade, based on building averages, in the percent correct metric, for all Kansas schools.

The patterns are difficult to evaluate. Has reading performance really declined? Has fourth grade math improved dramatically while seventh and tenth grade math have remained constant? Why should expository reading scores have plummeted in 1994 while narrative reading was unaffected? Capturing longitudinal trends in student performance is critical to understanding what works and what does not work in schools. But, if the scores are not equated over time, such trends cannot be accurately captured.

But even in these circumstances one analytic opening is available. It is reasonable to assume that high scoring schools one year will also score well the next and low scoring schools low. We can normalize (or standardize) any year's score distribution by dividing each building mean by the standard deviation of the distribution of building means. This produces a simple index where the average building has a score of 0, the buildings with the highest scores are about +3.5, and those with the lowest scores about -3.5 each year. Schools, which from one year to the next perform better than other schools, will move up on this normalized index. Since the index has the same distribution for all subjects and all grades, we can compare across subjects, across grades, and over time.

A weakness of this method is that it tells us only if a school is moving up or down in the rank ordering. It cannot tell us if improvement is taking place statewide. However, it seems reasonable to suppose that the actual achievement of Kansas's students in the 1990s has been (1) stable or (2) improving.[4] In the first instance, positive change in a school's index value equates to real improvement; in the second instance, the same is true but the improvement will be underestimated.

NCREL's analysis of the 1993 to 1997 Kansas assessment data statewide produced correlations of building level grade means between adjoining years on the order of 0.3 to 0.6 for each subtest and each grade;[5] see Table 2. This is lower than expected and raises concerns about the reliability and accuracy of the analysis NCREL proposed.

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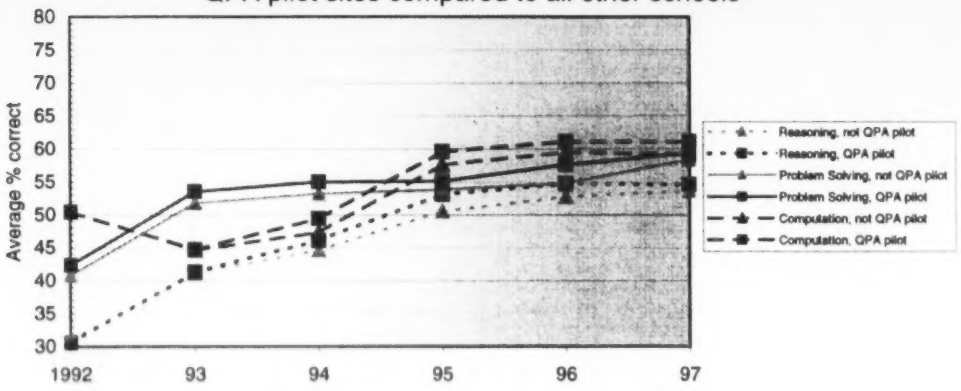
[3] To construct yearly comparisons, Kansas State Board of Education staff have begun to report improvement based on analysis of the common items only (Kansas State Board of Education, 1996a).

[4] Elizabeth Stella and her colleagues in 1996 found that 39 percent of Kansas' employers were of the opinion that the reading skills of new employees needed improvement. In 1989, the corresponding figure was 57 percent (Stella 1997). This decrease suggests elementary and secondary schools in Kansas have become more productive recently.

[5] These correlations are calculated on the standardized measures just described. However, standardized and unstandardized versions of variables produce the same correlations, since order and metric are maintained. Recall that we have combined subscales in a manner somewhat different from the practice of the University

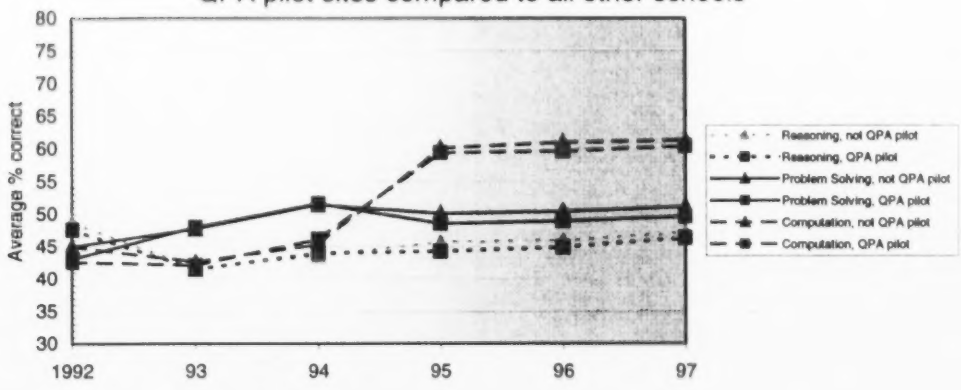
Kansas Assessment, Math, Grade 4

QPA pilot sites compared to all other schools



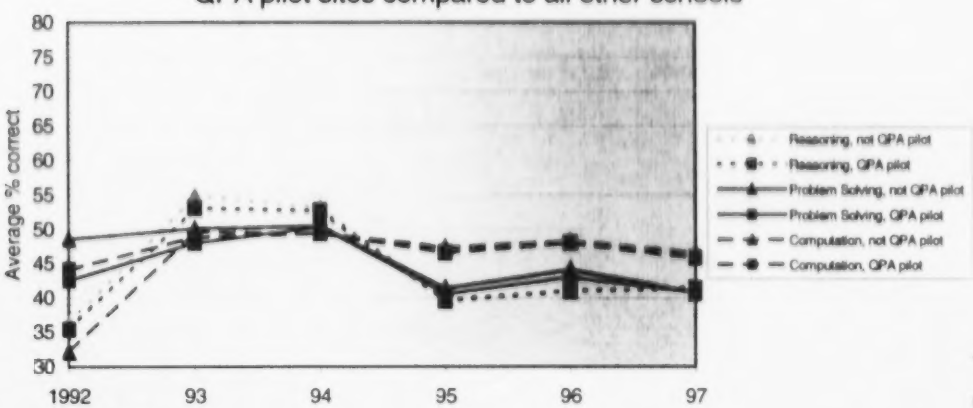
Kansas Assessment, Math, Grade 7

QPA pilot sites compared to all other schools



Kansas Assessment, Math, Grade 10

QPA pilot sites compared to all other schools



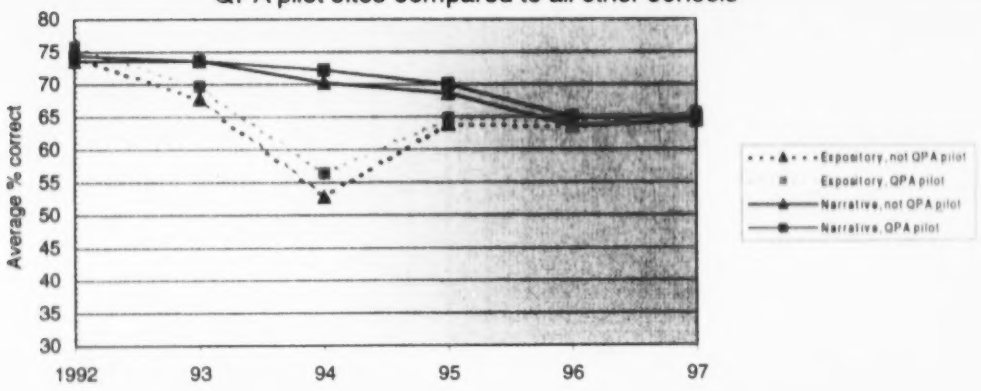
ies,

but not major differences.

BEST COPY AVAILABLE

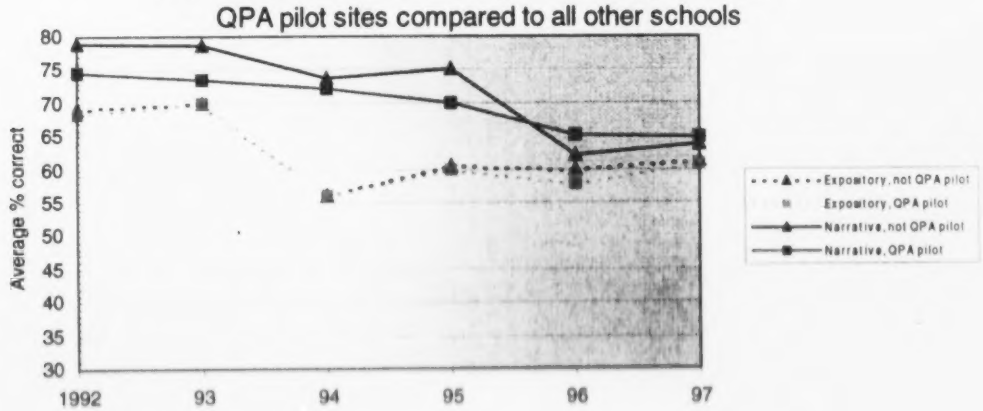
Kansas Assessment, Reading, Grade 3

QPA pilot sites compared to all other schools



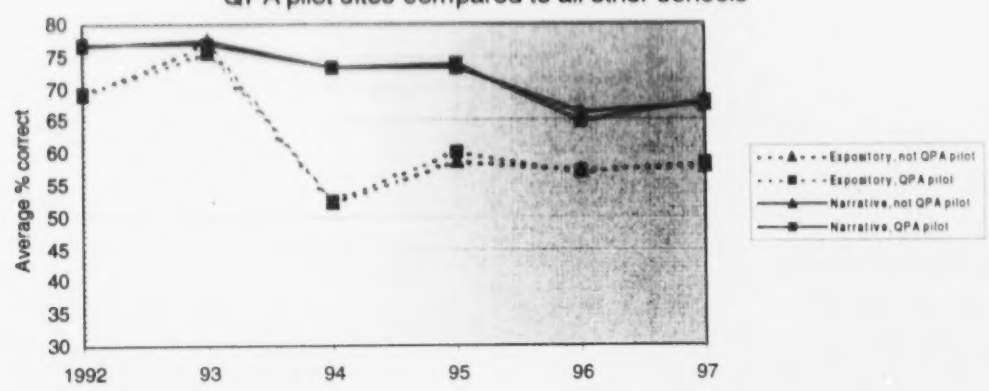
Kansas Assessment, Reading, Grade 7

QPA pilot sites compared to all other schools



Kansas Assessment, Reading, Grade 10

QPA pilot sites compared to all other schools



For comparative purposes, we computed building level correlations between adjoining years for statewide test data from Illinois and Michigan.[6] There, the correlations fall in the expected 0.7 to 0.8 range. The Kansas results suggest a shared variance of less than 20 percent for most subtests between most adjoining years compared to 50 percent or higher in Illinois and Michigan). This finding casts doubt on the accuracy of longitudinal analyses based on the Kansas Assessment results.

Certain Kansas Assessment subtests were re-administered—as happened for Expository Reading in 1995, 1996, and 1997; for Narrative Reading in 1996 and 1997; and the Mathematics scales in 1995 and 1996. The 1997 math forms were new, but equated to the 1995 results. However, the correlations of the building level grade means for these repeated test are essentially indistinguishable from years in which tests were not repeated. The one exception is the 1995-96 math correlation, which almost reaches 0.7.

Table B1. Building Level Correlations over Time

		1993	1994	1995	1996
Expository Reading					
	1994	.358			
	1995	.493	.602		
	1996	.357	.487	.578	
	1997	.438	.406	.516	.487
Narrative Reading					
	1994	.394			
	1995	.295	.571		
	1996	.383	.531	.553	
	1997	.259	.430	.385	.541
Mathematics					
	1994	.543			
	1995	.622	.651		
	1996	.513	.541	.687	
	1997	.512	.541	.617	.639

Work at the University of Kansas' Center for Educational Testing and Evaluation is also generating some findings supportive of our analysis. Using only the most comparable data from 1995 to 1997, they report that two-thirds of the schools change direction each year on three-year trend lines. That is to say, of schools with improving scores from 1995 to 1996, for instance, two-thirds show declines from 1996 to 1997 (Pomplun, 1997).

In light of these facts, we concur with Dr. John Poggio that it would be unwise to attempt sophisticated statistical analysis on these data (Poggio 1997). Nevertheless, schools which consistently fall at the ends of the distributions of these data—and recall that we are using data for three grades, five constructs, and six years—are, it seems safe to say, different in some sense from those which never reach the ends of the distributions.

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[6] Illinois and Michigan were used simply because NCREL previously had analyzed those states' data, and not to present their programs as exemplars. Similar patterns are to be found for most other standardized tests, state or commercial.

Our methodology requires we identify 20 improving schools. That task these data and our methods to support adequately.

Construction of Standardized Assessment Measures

The Kansas Assessments provide a variety of subscale scores. This number has been shrinking. This study required a consistent set of core indicators. From the Center for Educational Testing and Evaluation at the University of Kansas, we obtained building level grade means, in a percent correct metric. As discussed elsewhere, we determined that five measures were required: narrative reading, expository reading, mathematics problem solving, mathematics computation, and mathematics reasoning. To convert the percent correct measures to a form comparable to each other and over time, we operationalized them as follows:

1. For the 1992 through 1994 assessments, add the three performance-item building/grade level means in grades four and seven and the four in grade 10 to create one performance item total at each grade.
2. Compute the 1992 standardized scores (mean of 0, standard deviation of 1) for each grade for the subscales: knowledge, problem solving, reasoning, communications, concepts, procedures, calculator, and performance item total. Obtain the mean subscale score from these eight subscales; renormalize to mean of 0 and standard deviation of 1.
3. In 1992, the math assessment was offered to schools in two non-equated forms to schools. Schools administered form A or form B, never both. We standardized each form separately and combined (interleaved) the scores into one variable. We then re-normalized the variable to reset it to a mean of 0 and standard deviation of 1.
4. Compute the 1993 standardized scores for each grade for the following subscales: knowledge, problem solving, reasoning, communications, and total performance items scale score. Obtain the mean subscale score from these five subscales. Renormalize.
5. Compute the 1994 standardized scores for each grade for the following subscales: knowledge, problem solving, reasoning, communications, and total performance items scale score. Obtain the mean subscale score from these five subscales; renormalize.
6. Compute the 1995 standardized scores for each grade for the following subscales: problem solving, reasoning, communications. Obtain the mean subscale score from these three subscales; renormalize.
7. Compute the 1996 standardized for each grade for the following subscales: problem solving, reasoning, communications. Obtain the mean subscale score from these three subscales; renormalize.
8. Compute the 1997 standardized scores for each grade for the following subscales: problem solving, reasoning, communications. Obtain the mean subscale score from these three subscales; renormalize.
9. For each year, separately compute the standardized scores for each grade for the expository reading and the narrative reading subscales.

Design of the Teacher Survey

Since there was no opportunity to pilot test a custom instrument for this study, the Teacher Survey was assembled from previously published items. This technique provides assurance the items will provide usable results and allows for comparison of results, a sort of benchmarking.

We focused our search for items on instruments that addressed change in schools, principles from the effective schools literature, and critical themes from the research

literature. To convert this large sample of items into a reasonable survey, the principal investigator prepared a thematic outline of proposed content. This was refined in staff discussion. We then went through several iterations of in-house review to winnow the items to a manageable number, but with sufficient coverage to have the expectation of utility and technical quality.

The largest proportions of items were drawn from the work of Leithwood and Aitken (1995). Other sources providing items include the University of Wisconsin's catalog of enacted curriculum items (Porter and Smithson, 1995) and the National Staff Development Council (1994). Nearly all these items were used verbatim. Nine items were reworded slightly. Also consulted but not contributing items were the surveys supporting the Third International Mathematics and Science Study (NCES, 1995) and the Schools and Staffing Surveys (NCES, 1994).

In addition, NCREL staff wrote 10 custom items. Three were teacher identification items, one was an open-ended question asking teachers to identify the three most important factors making them successful, and six asked about the amount of change they had experienced in their teaching practice since their participation in the QPA pilot.

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APPENDIX C

INSTRUMENTS

History of Events between Fall 1991 and Spring 1997 Linked to Changes in Pupil Academic Performance at _____ School

Prepared by: _____

on _____, 1997

Position: _____

DIRECTIONS: Please write an informal history outlining your school's experiences from fall 1991 to spring 1997. This history should focus on the most important events and developments that shaped the instructional process at the school during this period, particularly as influenced by QPA-related developments.

In most circumstances, the principal will write this history, with input from other staff as necessary. The history need not be polished to perfection. A set of questions to help structure your thinking and your responses begins on the next page. At your school, other topics may be more relevant. Feel free to introduce and discuss them. The primary purpose is to identify, from the school's perspective, what events, developments, factors, or changes best account for why the school today is different from what it was before 1991. The focus is on the events and developments shaping the instructional process, particularly as influenced by QPA-related developments, what worked and what didn't.

This is an informal history. Jotting down bullet points is a good way to begin. As necessary, the gaps between these can then be filled. Use the format beginning on the reverse, or use a format of your choice, but, please, do indicate your name, position, and the school you are writing about at the top of your document. Any supplementary material you wish to send with the history will be welcome.

NCREL will treat these histories in strict confidence. They will not be made available to any other agency or staff. Your honest feedback is critical to our understanding of the factors that affect student academic performance in Kansas' schools.

Our report goes to the legislature in January. This requires us to ask that you complete the history as soon as possible. Please return it to us by September 8, 1997, at the address:

North Central Regional Educational Laboratory
ATTN: Evaluation Department
1900 Spring Rd., Suite 300
Oak Brook, IL 60523-1480

A pre-addressed, stamped envelope is provided for your use. (If you'd like to save us a penny or two, e-mail your history to <arie@ncrel.org>.) Thank you very much for your cooperation and we wish you continued success in improving your school and your students' progress.

Summary. Please identify, from the school's perspective, what events, developments, factors, or changes best account for why the school today is different from what it was before 1991. Identify what worked and what did not work to bring about the change.

Instructional practice, instructional leadership. How have teachers changed instructional practices since 1991? Were changes individual or collective efforts? Why were changes made? Who leads change? Who assures stability/continuity?

Curriculum development, curriculum alignment. How has the curriculum changed since 1991? Was it rewritten? Is it more or less comprehensive? What is its focus? Is it now more or less integrated? Please explain. Is there an underlying philosophy of instruction or curriculum? How are the needs of special students (special education, bilingual) incorporated?

Assessment. Are there clear outcome specifications or performance goals all staff understand and accept? Who created them? In what subjects? Is assessment aligned with instruction? How do you know it is? Has monitoring of student performance changed since 1991? How? Why? Who is responsible?

Professional development. What kinds of professional development opportunities are available to staff? How do staff use these opportunities? How is this different from before 1991? How does this training align with the school mission and its focus on improvement? Do these opportunities lead to more effective instruction?

Decision making. Who decides instructional and curricular issues? How much autonomy do staff have(overall, in their specialties, in their classrooms? How much

collaboration exists among teachers, between administration and teachers, between school staff and parents and community? Is there a school mission/vision statement? How does it guide the school's work?

Implementation. How does your school plan and conduct change? Who is involved? What is the level of their involvement? What effective schools principles have been put into place? With what effect?

External resources. Does the school provide any social services? How have the site council's recommendations been implemented? How are outside experts, community members, parents utilized by the school? How does the school collaborate with the community to provide services?

We at NCREL would like to express our sincere appreciation to you for your cooperation in writing this story of what has made your school unique. As stated above, your words will remain strictly confidential, not to be shared with any other agency. We will analyze these histories and use them, in conjunction with analyses of focus group reports, staff surveys, and school outcome data, to understand what factors, within the QPA context, have made a difference to student academic performance in Kansas.

TEACHER SURVEY

part of a study of

THE LONG-TERM EFFECTS OF THE KANSAS QUALITY PERFORMANCE ACCREDITATION SYSTEM

Instructions:

Only teachers who provide instruction in reading, English, or mathematics should complete this survey. Please return the survey, using the provided pre-addressed stamped envelope, on or before September 23, 1997. Your cooperation in completing this survey frankly and honestly is very much appreciated. NCREL wishes you continued success improving your school and increasing your students' academic progress. This study is mandated by the Kansas legislature and is supported by Andy Tompkins, Commissioner of Education.

If the envelope is missing, please mail to:
North Central Regional Education Laboratory
Evaluation Department
1900 Spring Road, Suite 300
Oak Brook, IL, 60523-1480.

Questions? Call 630-218-1076.

Findings from this survey will help legislators and other decision makers who are grappling with the design and impact of the Kansas Quality Performance Accreditation system. Your responses will remain completely confidential. The answers you give will be combined with those of other teachers and can never be identified as yours. Please respond frankly and truthfully. School improvement requires input from all concerned, particularly from those who know the work of schools best—you, the teachers.

1. **To begin, please tell us the name of the school where you teach:**

   _____,

   the district name: _____,

   and the district number:_____.

2. **What subjects do you teach? Check all those you teach this year.**

   __ Communication skills
   __ English
   __ Language Arts
   __ Mathematics (all forms)
   __ Reading
   __ Writing

3. **To what grades do you teach these subjects? Check all those you teach this year.**

   __ Kindergarten
   __ Grade 1
   __ Grade 2
   __ Grade 3
   __ Grade 4
   __ Grade 5
   __ Grade 6
   __ Grade 7
   __ Grade 8
   __ Grade 9
   __ Grade 10
   __ Grade 11
   __ Grade 12

Please indicate whether you agree or disagree with each of the statements below. For each statement, check the <u>one</u> box that best describes your opinion.

SECTION 1 – SCHOOL GOALS, MISSION, PRINCIPLES	**Strongly Agree**				**Strongly Disagree**
4. Our school's mission and goals are worth striving to achieve	☐1	☐2	☐3	☐4	☐5
5. Our school's goals and mission affect how and what I teach.....	☐1	☐2	☐3	☐4	☐5
6. Teachers in our school share a similar set of values, beliefs, and attitudes about teaching and learning	☐1	☐2	☐3	☐4	☐5
7. Our school offers a strong and challenging academic curriculum....	☐1	☐2	☐3	☐4	☐5
8. Our school's curriculum emphasizes a broad range of student achievement.....	☐1	☐2	☐3	☐4	☐5
9. Our school's curriculum emphasizes developing student life skills..	☐1	☐2	☐3	☐4	☐5
10. Our school's curriculum emphasizes developing student self-worth.	☐1	☐2	☐3	☐4	☐5
11. Our school's curriculum emphasizes developing students' commitment to lifelong learning	☐1	☐2	☐3	☐4	☐5
12. Our school collects data systematically in order to continually improve	☐1	☐2	☐3	☐4	☐5
13. Teachers regularly monitor our school's progress toward achievement of our goals	☐1	☐2	☐3	☐4	☐5
14. Students in our school know they need to meet or exceed clearly defined expectations.....	☐1	☐2	☐3	☐4	☐5
15. At our school, the consequences for inappropriate student behavior are immediate and consistent	☐1	☐2	☐3	☐4	☐5
SECTION 2 – SCHOOL/PARENT/COMMUNITY RELATIONS					
16. The local community understands our school's mission statement ..	☐1	☐2	☐3	☐4	☐5
17. Parents are committed to the goals and mission of our school.....	☐1	☐2	☐3	☐4	☐5
18. The school community works together to identify core skills and knowledge that all students will master.....	☐1	☐2	☐3	☐4	☐5

	Strongly Agree				Strongly Disagree
19. Our school provides opportunities for students to become involved in the community (e.g., by using community resources or participating in community projects)	☐1	☐2	☐3	☐4	☐5
20. Our school provides access to community support services for children, families, and the general community	☐1	☐2	☐3	☐4	☐5
21. School staff encourage parent-teacher interaction	☐1	☐2	☐3	☐4	☐5
22. School staff take specific actions to encourage parents' involvement in children's homework	☐1	☐2	☐3	☐4	☐5
23. There are strong, positive relationships between students and staff in our school	☐1	☐2	☐3	☐4	☐5

SECTION 3 – PROFESSIONALISM AND STAFF DEVELOPMENT

24. I have frequent conversations with other teachers at school about teaching practices or curriculum issues	☐1	☐2	☐3	☐4	☐5
25. There is frequent, ongoing, collaborative work among teachers in our school	☐1	☐2	☐3	☐4	☐5
26. Our staff is open to new ideas and teaching methods	☐1	☐2	☐3	☐4	☐5
27. Our school administrators encourage and support teachers who are willing to take the risk of trying new instructional strategies	☐1	☐2	☐3	☐4	☐5
28. The contributions of all staff, new and established, are valued	☐1	☐2	☐3	☐4	☐5
29. Staff recruitment is fair and equitable	☐1	☐2	☐3	☐4	☐5
30. Teacher expertise is of paramount importance in staffing	☐1	☐2	☐3	☐4	☐5
31. Assignment of students to classes is based primarily on student need (rather than on teacher or administrator preferences)	☐1	☐2	☐3	☐4	☐5
32. Resources and technical assistance are available to help staff improve effectiveness	☐1	☐2	☐3	☐4	☐5
33. Our school provides workshops that help make new ideas meaningful to me.	☐1	☐2	☐3	☐4	☐5
34. Our school encourages staff to participate in off-site staff development activities	☐1	☐2	☐3	☐4	☐5

	Strongly Agree				Strongly Disagree
35. Our school provides opportunities to collaborate with colleagues from outside the school	☐1	☐2	☐3	☐4	☐5
36. The staff development I have participated in over the past two years has addressed my most pressing professional needs	☐1	☐2	☐3	☐4	☐5
37. I have changed classroom practice as a direct result of participation in staff development activities	☐1	☐2	☐3	☐4	☐5
38. The quality of student work in my classes has noticeably improved as a direct result of participation in staff development activities. .	☐1	☐2	☐3	☐4	☐5
39. Overall, I am very satisfied with my job	☐1	☐2	☐3	☐4	☐5

SECTION 4 – SCHOOL LEADERSHIP

40. Leadership in our school . . .

a. consults me when initiating actions that affect my work	☐1	☐2	☐3	☐4	☐5
b. responds to my personal professional concerns	☐1	☐2	☐3	☐4	☐5
c. stimulates me to think about what I am doing for my students.	☐1	☐2	☐3	☐4	☐5
d. encourages teachers to work toward the same goals	☐1	☐2	☐3	☐4	☐5
e. has high expectations for us teachers as professionals	☐1	☐2	☐3	☐4	☐5
f. frequently acknowledges our performance	☐1	☐2	☐3	☐4	☐5
g. leads by "doing," rather than by "telling"	☐1	☐2	☐3	☐4	☐5
h. participates actively in classroom instruction	☐1	☐2	☐3	☐4	☐5
i. commands respect from most staff in our school	☐1	☐2	☐3	☐4	☐5
j. helps teachers feel and act like leaders	☐1	☐2	☐3	☐4	☐5

SECTION 5 – INSTRUCTION

41. I hold high expectations for each student's learning and behavior	☐1	☐2	☐3	☐4	☐5
42. I frequently implement new programs or new teaching strategies	☐1	☐2	☐3	☐4	☐5
43. My instructional strategies enable students to construct their own knowledge	☐1	☐2	☐3	☐4	☐5
44. I always begin my classes promptly	☐1	☐2	☐3	☐4	☐5
45. Student time-on-task is consistently high in my classes	☐1	☐2	☐3	☐4	☐5
46. My instruction is carefully planned to provide diverse activities and experiences for my students	☐1	☐2	☐3	☐4	☐5

	Strongly Agree				Strongly Disagree
47. My instruction helps students understand how a particular topic relates to their prior knowledge	☐1	☐2	☐3	☐4	☐5
48. My instruction stresses learning skills and applications that connect with the world beyond the school	☐1	☐2	☐3	☐4	☐5
49. I have considerable flexibility in deciding on instructional practices	☐1	☐2	☐3	☐4	☐5
50. I maintain a fairly rapid pace of instruction in my classes	☐1	☐2	☐3	☐4	☐5

How important, for you, is each of the following to your current classroom practice?	Don't Use	Not So Important	Important	Very Important
51. Experiential, inductive, hands-on learning	☐1	☐2	☐3	☐4
52. Active learning, with students doing, talking, collaborating, planning	☐1	☐2	☐3	☐4
53. Higher-order thinking: learning key concepts and principles deeply	☐1	☐2	☐3	☐4
54. Students taking responsibility for their work: setting goals, choosing tasks, keeping records, monitoring and evaluating progress	☐1	☐2	☐3	☐4
55. Cooperative, collaborative activity: developing the classroom as an interdependent community	☐1	☐2	☐3	☐4
56. Multidisciplinary instruction	☐1	☐2	☐3	☐4
57. Problem solving sessions	☐1	☐2	☐3	☐4
58. Heterogeneous groupings: groups composed of varied skill levels	☐1	☐2	☐3	☐4
59. Varied groupings: students change group membership or role	☐1	☐2	☐3	☐4
60. Students teach each other	☐1	☐2	☐3	☐4
61. Whole class discussion	☐1	☐2	☐3	☐4
62. Students leading discussions	☐1	☐2	☐3	☐4
63. Provide supplemental, remedial, or enrichment instruction to a pull-out group while the rest of the class works on assignments	☐1	☐2	☐3	☐4
64. Work on administrative tasks, such as record keeping or correcting papers while students work on assignments	☐1	☐2	☐3	☐4
65. Teacher using computers for demonstrations or simulations	☐1	☐2	☐3	☐4

How much do each of these challenge your instructional effectiveness?	Not At All	A Little	Quite A Lot	Always
66. Students with different academic abilities	☐1	☐2	☐3	☐4
67. Students from a range of backgrounds (e.g., socio-economic, language)	☐1	☐2	☐3	☐4
68. Students with special needs (e.g., hearing, vision, special education)	☐1	☐2	☐3	☐4
69. Uninterested students	☐1	☐2	☐3	☐4
70. Disruptive students	☐1	☐2	☐3	☐4
71. Shortage of computer hardware or software	☐1	☐2	☐3	☐4
72. Shortage of instructional equipment or supplies	☐1	☐2	☐3	☐4
73. Inadequate physical facilities	☐1	☐2	☐3	☐4
74. High student/teacher ratio	☐1	☐2	☐3	☐4
75. Low morale	☐1	☐2	☐3	☐4
76. Concerns about personal safety	☐1	☐2	☐3	☐4

SECTION 5 – STUDENT ASSESSMENT	Strongly Agree				Strongly Disagree
77. My colleagues and I agree on the criteria for student assessment, evaluation, and reporting	☐1	☐2	☐3	☐4	☐5
78. Our school's assessment, evaluation, and reporting practices reflect the learning opportunities we provide students	☐1	☐2	☐3	☐4	☐5
79. We use assessment information to plan further learning opportunities for individual students and groups	☐1	☐2	☐3	☐4	☐5
80. We are developing a good match between our assessment strategies and our curriculum objectives	☐1	☐2	☐3	☐4	☐5
81. Our assessment practices include discussions and conferences with students	☐1	☐2	☐3	☐4	☐5
82. I give my students specific, frequent feedback about their learning	☐1	☐2	☐3	☐4	☐5
83. I collaborate with students to compile portfolios of work samples	☐1	☐2	☐3	☐4	☐5
84. I compare students' current and past products, performances, and learning processes	☐1	☐2	☐3	☐4	☐5
85. I urge students to reflect on and evaluate their own learning	☐1	☐2	☐3	☐4	☐5

How important, for you, is each of these in determining how well your students progress during the school year?	Don't Use	Not So Important	Important	Very Important
86. Standardized tests produced outside the school	☐1	☐2	☐3	☐4
87. My short-answer or essay tests	☐1	☐2	☐3	☐4
88. My multiple choice, true-false, or matching tests	☐1	☐2	☐3	☐4
89. Homework	☐1	☐2	☐3	☐4
90. Project or practicum or laboratory exercises	☐1	☐2	☐3	☐4
91 Students' work samples	☐1	☐2	☐3	☐4
92. Observation of students	☐1	☐2	☐3	☐4
93. Student class participation	☐1	☐2	☐3	☐4

SECTION 6 – SUCCESS

94. Below, please list the three most important factors making you successful in the classroom.

1.

2.

3.

Focus Groups/Site Visit Protocol
Kansas Quality Performance Accreditation Assessment
VERSION II

Site Visit Preparation

- Describe purpose of the visit: to gather in-depth information about the factors most influencing the change process at your school and obtain fuller understanding of how student outcomes have improved since 1991.
- Make sure we (NCREL) has copies of all recent QPA materials not in NCREL's current file, if there is no critical history document, encourage school to develop one; encourage principal to make sure to get surveys of all staff and key stakeholders
- Prior to visit, Review all documentation on QPA for that school to determine school specific questions
- Let's bring some NCREL resources with us, e.g. Pathways CD, NCREL brochure, product catalog, other materials
- During visit, Obtain copies of recent QPA/school materials/artifacts to guide analysis

Our Mission

As a result of the site visit, we should be able to tell the story of how this school has improved over the last five years, identify factors influencing the change, and provide very specific examples and powerful quotes. Remember that we are not evaluating the QPA system. We are seeking to determining key change factors (regardless of QPA), but note how QPA contributed. We will have to push schools to think outside the QPA frame, because they will think we are there just to hear good things about QPA and what it has accomplished.

We can use the critical history document to frame deeper probing of questions around key areas of QPA: instructional practice, curricular alignment, community collaboration, leadership, etc. During the site visit, we are investigative reporters, seeking powerful quotes and a clear sense of how and why school improvement has occurred at this school.

Guiding Questions

These questions frame our visit, and our adaption of these questions depend on how the school wrote their critical history document:

Instructional practice, instructional leadership: How have teachers changed instructional practices since 1991? Were changes individual or collective efforts? Why were changes made? Who leads change? Who assures stability/continuity? **What are specific examples of change in instructional practices? Ask about variance among teachers and the range of instructional practices.**

Curriculum development, curriculum alignment: How has the curriculum changed since 1991? Was it rewritten? Is it more or less comprehensive? What is its focus? Is it now more or less integrated? Please explain. Is there an underlying philosophy of instruction or curriculum? How are the needs of special students (special education, bilingual) incorporated? **What are specific examples of alignment between curriculum, instruction, and assessment?**

Assessment and Student Outcomes: Are there clear outcome specifications or performance goals all staff understand and accept? Who created them? In what subjects? Is assessment aligned with instruction? How do you know it is? Has monitoring of student performance changed since 1991? How? Why? Who is responsible? **What are specific examples of how teachers use student assessment data to change instructional practice? Based on our understanding of growth in student outcomes, probe for information on whether our understanding is about right, do we understand the student outcomes trends correctly?**

Professional development: What kinds of professional development opportunities are available to staff? How do staff use these opportunities? How is this different from before 1991? How does this training align with the school mission and its focus on improvement? Do these opportunities lead to more effective instruction? **What are some specific examples of how professional development has changed your classrooms?**

Decision making and School Leadership: Who decides instructional and curricular issues? How much autonomy do staff have (overall, in their specialties, in their classrooms? How much collaboration exists among teachers, between administration and teachers, between school staff and parents and community? Is there a school mission/vision statement? How does it guide the school's work? What role does the principal play in leading change and decision-making? **Describe a specific example of how your school made an important instructional/program decision - Get timeline of key decisions.**

How does this school use its internal and external resources creatively? How is leadership shared - what leadership roles do various groups assume?

Implementation of School Improvement Plan and Mission: How does your school plan and conduct change? Who is involved? What is the level of their involvement? With what effect? **What are some specific ways that the school improvement plan or mission affects your everyday practice? What was the timeline for school improvement planning? When was the plan written, revised?**

Collaboration with external resources: Does the school provide any social services? How have the site council's recommendations been implemented? How are outside experts, community members, parents utilized by the school? How does the school collaborate with the community? **How has QPA changed how you work with parents and community (provide examples)? What role does the site council play in shaping the school culture and its instruction? Has community opinion of the school changed since 1991?**

School culture/climate: What evidence do you see that teachers are engaged in their work? Do students want to be at school? How do teachers and administration deal with disciplinary issues? Does teacher, parent, administration, community collaboration noticeably improve school culture?

Summary: What difference does all this stuff make? What are key big differences between 1991-1997? Are students really learning more, becoming better problem-solvers and critical thinkers? How do you know? [We may want to understand some of the key obstacles to school improvement, and these things will come up, so we probably should note them, but not focus on them.] What are you planning to do next? Why?

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